

Institutionalization, repression and political instability in authoritarian regimes

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Abstract

Given that autocrats can be challenged by insiders of their ruling coalition and/or by the citizens of the country they govern, what control strategies can they use in order to minimize the potential for conflict and violence? The current literature on authoritarian politics focuses on the use of co-optation and repression to explain how autocrats mitigate the hazardous conditions under which they rule. The former induce compliance and co-operation by providing social and material benefits, while the latter forces with the threat of physical punishment. While both control strategies received significant attention in the literature, they have been mostly examined separately from each other. Against this background, this thesis contributes to the literature on authoritarian politics and state repression by focusing on the connection between co-optation and repression, on how autocrats use these two control strategies to prevent challenges and how the use of one control strategy impacts the use of the other. This dissertation builds on some of the theoretical and empirical tensions in the current literature and brings several theoretical and empirical contributions to our understanding of authoritarian politics. Theoretically, this dissertation contributes to the literature by offering an actor-oriented theoretical explanation of autocratic repression against social campaigns, an alternative theoretical mechanism on the coup reducing effect of institutions and a transnational theoretical account of autocratic repression. The empirical contribution of this dissertation rests in showing that accounting for actors' characteristics improves models' predictive power, that we know very little about the factors that explain coups' success in autocracies and demonstrates there is a transnational interdependence in autocratic repression. The findings of this dissertation have implications for dissidents mobilizing against autocrats, for professionals and policy makers interested in political (in)stability, and for organizations attempting to improve human rights practices worldwide.

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1. Introduction

Previous literature on authoritarian politics proposes it to be an extremely perilous line of work: it lacks an independent authority to enforce agreements and violence is the ultimate arbiter of political conflicts (Svolik 2012). In the absence of an authority to enforce agreements among political actors, autocrats need control strategies that mitigate the sources of violence and conflict. These are two-fold: first, leaders can be challenged by members of their own ruling coalition through a coup d'état, and second, they can be challenged out in the streets by the population through protests, revolutions or insurgencies (Bueno de Mesquita et al. 2003; Gandhi 2008; Svolik 2012). Given these two potential sources of conflict in authoritarian regimes, what control strategies can autocrats use to minimize them?

The comparative literature on authoritarianism contends that autocrats use co-optation and/or repression as control strategies for challenges coming from elites and the population. Co-optation refers to the provision and extension of benefits to potential challengers in exchange for their cooperation and loyalty (Corntassel 2007). These can come in the form of direct transfers of material benefits, perks and spoils from the regime to individuals or groups, or through wider policy concessions. Besides direct transfers of benefits and patronage networks, autocracies use seemingly democratic institutions (political parties and legislatures) to co-opt challengers. Conversely, repression is the threatened or actual use of physical sanctions (torture, beatings, arrests, disappearances, etc.) against individuals or organizations, within the territory of the state, with the purpose of imposing a cost on the target and deterring activities or beliefs perceived to be threatening to the regime (Goldstein 1978). More simply, repression counters threats to the regime, undermines and eliminates the opposition, increases the costs of opposing the regime, and forces the population in tacitly supporting the regime or

not oppose it (Davenport 2007a). More simply, both strategies induce compliance and cooperation from individuals and groups by buying or forcing them.

Against this background, this thesis contributes to the literature on authoritarian politics and state repression by focusing on the connection between co-optation and repression, on how autocrats use these control strategies to prevent challenges and how the use of one control strategy impacts the other one. While both control strategies are discussed explicitly in the literature on authoritarianism, they have been examined mostly separate from each other.

On the one hand, the comparative literature on authoritarian politics entered an “*institutional turn*” which postulates that dictators create institutions in order to survive (Bueno de Mesquita et al. 2003; Gandhi and Przeworski 2007) and stabilize their power (Magaloni 2006; Gandhi 2008; Svolik 2012; Schedler 2013). It has been argued that durable authoritarian regimes obtain their strength from regime institutions, most notably political parties (Brownlee 2007). Precisely, political parties allow the regime to obtain information from the society, mobilize bases of support for the regime, channel or control any contention coming from societal group, or quell organized opposition towards the regime (Geddes 1999; Gandhi 2008; Fjelde 2010; Svolik 2012). Also, political parties lengthen the survival of regimes by setting boundaries to elite behaviour, regulating potential conflict between elites, and augment their cohesion (Magaloni 2006; Magaloni and Kricheli 2010). Moreover, legislatures also help authoritarian governance by offering elites an arena for bargaining and cooperation. They institute rules of interaction within the ruling coalition that check the dictator from reneging its promises, provide an arena for policy negotiations and compromises between elites and the dictator, and improve monitoring and detection of non-compliance between elites (Gandhi and Przeworski 2007; Gandhi 2008; Svolik 2012; Wright and Escibà-Folch 2012). By reducing misperception between the dictator and elites, legislatures prevent destabilizing actions that

could materialize in active conflict. Empirical results indicate that institutions reduce the hazard of irregular exit from office (Svolik 2012), the likelihood of successful coups (Bove and Rivera 2015), the likelihood of transition to subsequent dictatorship and increase the likelihood of democratization (Wright and Escribà-Folch 2012).

On the other hand, the repression literature has focused mostly on structural factors to explain variation in repression across context, time, and space (see Abouharb and Cingranelli 2007; Carey 2010; Poe, Tate, and Keith 1999; Davenport 2007b; Davenport 2007a; Nordås and Davenport 2013; Davenport and Armstrong 2004; Hill and Jones 2014). More generally, this strand of literature contends that repression is used by regimes to set the limits within which citizens can act, to control or eliminate challenges, and facilitate evolution in a particular ideological or developmental direction (Davenport 2007a). Regimes use repression if benefits exceed costs, alternatives are not favourable, and there is a high probability of destroying the opposition (Moore 2000; Shellman 2006). Interestingly, empirical results show that sometimes repression increases dissent (Francisco 1995; Francisco 2004; Kocher, Pepinsky, and Kalyvas 2011), sometimes it decreases it (Downes 2008; Lyall 2009), it alternates by increasing or decreasing it (Lichbach 1987; Muller and Weede 1990; Moore 1998), or it does not have any effect (Gurr and Moore 1997). Under autocracies, violent repression reduces the likelihood of regular exits from office and coups (Escribà-Folch 2013). When co-optation and repression were jointly considered, results suggest that higher levels of institutionalization increase violent repression, but reduce violations of empowerment rights (Frantz and Kendall-Taylor 2014), and show that autocracies with multiple parties, but no legislature, are more repressive compared to autocracies with multiple parties and an open legislature (Rivera 2016).

While rich in theoretical propositions and empirical testing, the comparative literatures on authoritarian institutions and state repression have overlooked several aspects of the mutual relationship between co-optation and repression.

First, the underlying theoretical assumption behind the emergence of autocratic institutions is that these represent an equilibrium point for the strategic interaction between actors (Pepinsky 2014). Precisely, Gandhi (2008) argues and shows in a game theoretic model that the level of institutionalization (and implicitly co-optation) in an autocracy is the results of the interaction between the strength of the opposition and the government ability to punish non-cooperation. Precisely, when the opposition is weak and fragmented, dictators offer very little in term of institutional concessions. As the strength of the opposition increases, the dictator is forced into making more concessions as there is a higher threat of rebellion. Finally, if the opposition refuses the concessions provided by the dictator and it is unable to punish them, then low level conflict ensues which can overthrow the dictator. The implication of this theoretical argument is that any outcomes that institutions might shape (e.g. repression, coups, revolutions, insurgencies, etc.) in an autocracy should be a function of the actors' characteristics. However, current theoretical and empirical approaches examine only the characteristics of one of the actors while assuming away the characteristics of the other actor. Then, there is a disconnect between the assumption on which theoretical explanations are built in the literature and the ensuing empirical approaches to test them.

The first chapter of this thesis addresses directly this shortcoming by using an actor-oriented approach in explaining the variation in the use of lethal repression against social movements. In this chapter, I argue that authoritarian regimes' decision to refrain from responding with lethal repression to social movements is a function of the regime's institutional ability to co-opt the opposition, the backlash potential of repression and the campaign's threat

perception from the regime. Further, I explain how the interaction between the status of political parties and a social campaign's unity capture these factors, and develop conditional theoretical propositions on when autocracies are more likely to refrain from responding with lethal repression to social campaigns. The empirical analysis uses data on social campaigns from NAVCO 2.0 (Chenoweth and Lewis 2013) and on institutions from Cheibub, Gandhi, and Vreeland (2010) to show that autocracies that ban political parties are the least likely to refrain from using lethal repression against united social movements. Also, single party regimes (compared to multi-party regimes) tend to be more likely to refrain from using lethal repression as social campaigns become more fragmented. This section makes a valuable contribution to the literature on authoritarianism and repression by offering a theoretical account on how actors' characteristics shape the use of repression by autocracies, and by showing empirically, that accounting for these characteristics improves our ability to increase the predictive power of repression models.

Second, the literature on elite co-optation suffers of a theoretical and empirical tension regarding the suppressing effect of institutions on coup activity. In the literature, institutions represent controlled bargaining spaces where the opposition voices demands, negotiates policies with the dictator and obtains concessions without letting the dictator appear weak (Gandhi and Przeworski 2007; Gandhi 2008). It is based on the intuition that the policy bargaining process reduces the information asymmetry between the leader and the opposition, as both sides reveal their preferences in a safe space. Then, since both sides are aware of their preferences over policies and can monitor each other actions, they have lower incentives to engage in a risky coup attempt (Svolik 2012; Bove and Rivera 2015). However, the theoretical tension in this explanation emerge from the fact that elites do not reveal their true preference regarding leadership. This happens because showing too much opposition to the leader can get

them purged. Further, it is still unclear how institutions can reduce the likelihood of a coup being successful given that they are bargaining spaces, not specialized units that tilt the scales in an armed battle between the dictator and its challengers. Empirically, the tension in current models of coup activity comes from the fact that studies testing the effect of civilian institutions on coup activity suffer of selection bias as they only consider their effect on successful coup while disregarding their effect on coup attempts (Svolik 2012; Bove and Rivera 2015).

In the second chapter of this dissertation I exploit this theoretical tension in the literature, and explore how legislature and political parties reduce coup attempts, but do not have any effect on their outcome. Precisely, I provide an alternative theoretical argument that posits that institutions, despite reducing information asymmetry between the dictator and elites (Svolik 2012), they also induce elites to falsify their preferences. This reduces the likelihood of a coup attempt by increasing the coordination problems between elites as they cannot distinguish between loyal and opportunistic supporters of the leader. Empirically, I use a two-stage selection model of coup activity, and show that most coup-proofing strategies work in preventing coups, but they have no effect on their outcome. More precisely, once we account for the effect of institutions in the first stage (i.e. coup attempt), having an elected legislature reduces the likelihood of coup attempts, but has no effect on its outcome. This analysis brings an important contribution to the study of coup determinants in autocracies by offering an alternative theoretical mechanism through which institutions reduce coup risk, and showing that the vast majority of factors commonly associated with coup success are found to be significant only in deterring coup onset. Yet, when disaggregating empirically coup determinants' effect on the two theoretically distinct processes, it turns out we know little about what makes coups successful in autocracies.

Finally, repression, as a control strategy, is treated as being independent from levels of repression from other regimes, while interdependent institutionalization strategies of regimes have received significant attention in the democratization literature (Gleditsch and Ward 2006; Elkins 2011). More simply, there is empirical evidence that institutionalization strategies diffuse between countries, while there are not any systematic analyses whether repression diffuses, and if does, through which pathways. This is problematic for our understanding of state repression because *“ignoring or inadequately modelling interdependence processes leads analysts to exaggerate the importance of common shocks, privileging contextual, exogenous-external, unit-level, or domestic-factor accounts”* (Franzese and Hays 2008: 752). Furthermore, incorporating insights about the effect of transnational linkages on state repression offers a more nuanced and comprehensive understanding of the inputs and outputs of repression in authoritarian regimes.

The third chapter of the dissertation examines how domestic factors create transnational linkages between autocracies that facilitate diffusion of repression between autocracies. This chapter revisits the core model of state repression and elaborates theoretically on how an autocracy’s level of repression is influenced by other autocracies’ levels of repression. I argue that autocrats adjust their levels of repression by emulating and learning from other autocracies with which they share similar institutions and experiences of dissent. This shared similarity is indicative of similar objectives of autocratic survival (Bueno de Mesquita et al. 2003), and act as cognitive shortcuts that provide satisfying, proximate models of repression in an uncertain environment (Neumayer, Plümper, and Epifanio, 2014; Odinius and Kuntz, 2015). Using spatial lag models and data on repression, institutions and dissent for 1951-2008, I find that repression diffuses between autocracies with similar institutions, but not similar dissent. This chapter brings an important contribution to our understanding of repression in authoritarian

regimes as it offers a novel theoretical account and systematic evidence of the international dimension of autocratic repression and the role institutions play in creating interdependence between autocracies.

2. Coercion and Cooptation in Authoritarian Regimes: Killing the United?

2.1 Abstract

Under what conditions do autocracies respond with lethal repression to protesters and when do they stop short from such actions? While the previous literature has focused on structural factors in explaining variation in state repression, an actor oriented approach has received little attention in the literature on state repression. Driven by this shortcoming, the author develops a theoretical explanation of repression that focuses on the interaction between actors' (government structures and opposition characteristics) in explaining the use of lethal repression against protesters. The decision to engage or refrain from lethal repression against social movements is a function of the ability of the regime to co-opt the opposition, the backlash potential of repression, and threat perception of the campaign by the regime. The paper argues that these factors can be captured by the status of political parties and campaign unity, and it develops conditional hypotheses of their effect on use of lethal repression against social movements. The empirical analysis shows that autocracies that ban political parties altogether are less likely to refrain from using lethal repression against social movements than regimes with a single party or multiple political parties. Also, single party regimes are more likely to refrain from using lethal repression against fragmented campaigns than multi-party regimes.

2.2 Introduction

Violence is an inherent feature of authoritarian politics that ultimately solves conflicts between political actors (Svolik 2012: 2). During the Arab Spring we observed two different patterns on the use of violence by regimes that aimed to solve the conflict between protesters and contested dictators: in Tunisia security forces fired rubber bullets on protesters, used clubs and tear gas

to disperse them, while in Egypt, the regime used police in plainclothes and squads of “young thugs” against the crowd gathered in Tahrir Square. Yet, in both cases the regime’s security forces stopped short of killing protesters. In comparison, the regimes in Yemen, Syria, or Libya used lethal, indiscriminate violence to quell the protests (Sutton, Butcher, and Svensson 2014). Moreover, in over 85% of the cases, authoritarian regimes respond with lethal repression to social movements (Chenoweth and Lewis 2013)¹. This type of answer is consistent with the so-called “Law of Coercive Responsiveness” which shows that when states’ status quo is being challenged from within, regimes respond with repression to counter or eliminate the threat (Davenport 2007a; Carey 2010). Yet, the comparative literature on authoritarianism shows that that not all authoritarian regimes repress equally (Pereira 2005; Davenport 2007b; E. Frantz and Kendall-Taylor 2014), and the level of repression in authoritarian regimes depends on their potential to co-opt the opposition (Magaloni 2006; Gandhi and Przeworski 2006; Geddes 2007; Brownlee 2007; Fjelde 2010; E. Frantz and Kendall-Taylor 2014). Additionally, most research on state repression focuses on structural factors to explain the variation of repression across context, time, and space, but it rarely examines how the interaction between actors leads to observed instances of repression (Poe, Tate, and Keith 1999; Davenport and Armstrong 2004; Davenport 2007a; Davenport 2007b; Abouharb and Cingranelli 2007; Carey 2010; Nordås and Davenport 2013; Hill and Jones 2014).

Against this background, this paper examines why some regimes stop short of killing protesters, while others have no regard for human life and chose to use lethal, indiscriminate violence against protesters. Precisely, the paper adopts an actor oriented approach in which

¹ Lethal repression refers to instances in which governments engage in actions that seek to physically deter or eliminate protesters. These actions include torture, severe beatings, extrajudicial killings, or mass violence. A social campaign is defined “*as a series of observable, continuous, purposive mass tactics or events in pursuit of a political objective.*” (Chenoweth and Lewis 2013: 2). They could be violent or non-violent.

instances of lethal repression are observed as a function of the regime's institutional capacity for broad based cooptation through political parties, and the social campaign's ability to overcome collective action problems by keeping its unity in objectives and actions against the regime. The interaction of these two factors is indicative of the regimes' potential to co-opt the opposition as an alternative to repression, the backlash potential of repression, and the threat perception of the campaign by the regime. Autocracies that ban political parties are less likely to refrain from lethal repression compared to regimes that have a single party or multiparty regimes, regardless of campaign unity. This happens because their costs of using lethal repression are lower and their alternatives for cooptation are more limited. Conversely, single party regimes are better suited to co-opt the opposition once it loses its unity, which makes them more likely to refrain from lethal repression when the campaign is fragmented as compared to regimes with multiple parties. Opposition parties in autocracies are better in overcoming collective action problems and mobilizing groups against the regime (Aksoy, Carter, and Wright 2012), which makes them more threatening towards regime survival while concessions from the regime could only make them stronger.

These theoretical propositions are tested and supported by a time-series cross-sectional empirical analysis of social movements in autocracies between 1950 and 2006. More precisely, the results indicate that autocracies that ban political parties are the least likely to refrain from using lethal repression against united social movements. Also, single party regimes (compared to multi-party regimes) tend to be more likely to refrain from using lethal repression as social campaigns lose their unity. Furthermore, accounting for the characteristics of the actors improves both the in-sample and out-of-sample predictive power of the models. This is indicative of the empirical added value of examining how the interaction between institutional

characteristics and campaign characteristics helps us separate between instances of non-lethal and lethal repression.

2.3 Autocratic survival, dissent and repression

Autocracies use of lethal repression as a response to social movements is the result of the regime's ability to co-opt the opposition, the backlash potential of repression and the threat perception of the campaign by the regime. Leaders of authoritarian regimes² seek to maximize the survival of their regime and extend their time in office (Bueno de Mesquita et al. 2003). The dictator ultimately needs to solve two essential problems in order to survive in office: authoritarian power-sharing and authoritarian control (Svolik 2012). The former refers to the capacity of the dictator to insulate himself from challenges (e.g. coup d'états) by including elites or political entrepreneurs in the ruling coalition, while the latter refers to the capacity of the dictator to co-opt or repress the masses into being quiescent, and not challenge him. In other words, dictators need to maintain popular support or have a quiescent population, while maintaining the cooperation of elites (Bueno de Mesquita et al. 2003; Magaloni and Kricheli 2010). The emergence of a popular uprising or social campaign signals to the ruling elite that the incumbent has lost some of his authority to govern. When a social campaign emerges despite risks of violent and, potentially, deadly sanctions, it is an informative signal of the intensity of anti-establishment sentiment and the underlying weakness of the regime (Kricheli, Livne, and Magaloni 2011). A popular uprising will act as a cue to the ruling elite to coordinate in overthrowing the incumbent (Casper and Tyson 2014). The incumbent will try to avoid prolonged popular uprising because it displays its weakness, it signals to the opposition that the leadership seat can be challenged, and it creates opportunities for regime insiders to overthrow

² In the current setup, I follow Gandhi (2008) and I equate the leader with the regime, as they will be used interchangeably in the paper.

the incumbent. Then, the dictator needs find quick and easy solutions to quell the protests before his position is undermined.

Repression serves this purpose as it is used to counter any threats to the regime, undermine and eliminate the opposition, increase the costs of opposing the incumbent, and force the population in tacitly supporting the government (Davenport 2007a). However, repression can be costly as resources need to be devoted to producing repressive legislation, publicize them, enforce their obedience, and punish offenders (Wintrobe 2000). Further, the effect of repression on dissent is quite unclear, as it sometimes repression increases dissent (Francisco 1995, 2004; Kocher et al 2011), sometimes it decreases it (Downes 2008; Lyall 2009), it is alternative positive and negative (Moore 1998; Lichbach 1987; Muller and Weede 1990), or it does not have any effect (Gurr and Moore 1997). Given this uncertainty, I assume that authoritarian regimes engage in a cost-benefit analysis to weigh the costs and benefits of repression, assess its alternatives, and likelihood of success (Moore 2000; Shellman 2006). Then, the decision whether to engage or not in lethal repression against social movements is determined by the regime's ability to co-opt the opposition, the backlash potential of repression and the threat perception of the campaign by the regime.

2.4 Cooptation in autocracies

Cooptation has received a lot of attention in the comparative literature on authoritarianism (Brownlee 2007; Gandhi and Przeworski 2006; Gandhi 2008; Svolik 2012; Frantz and Kendall-Taylor 2014). Here, cooptation is conceptualized as the ability of the ruling elite, or incumbent to exercise direct control over individual citizens, organized professional groups (peasants, workers, merchants, or business owners), and/or ethnic groups through provision of material and social benefits. The provision of material and social benefits can be through direct transfers of perks, privileges and rents from the regime to supporters, or it can

be through public goods and policy concessions (e.g. free health care, housing, education, etc.) that require an institutional framework (Gandhi and Przeworski 2007; Gandhi 2008; Svolik 2012). More simply, institutions help authoritarian regimes co-opt the opposition by providing them information from the society, mobilize bases of support for the regime, channel and control any contention coming from societal groups, or quell any organized opposition towards the regime (Svolik 2012; Geddes 1999; Gandhi 2008; Fjelde 2010). Similarly, Frantz and Kendall-Taylor (2014) contend that by coopting opponents through political parties and the legislature, the dictator separates potential opposition from the general public, identifies threats more easily by monitoring their activity and gauges the extent of their support. While this reduces the use of repression against the broader population, the dictator still needs more information when deciding to engage in repression to eliminate coopted elites or their network of supporters. For instance, the establishment of a regime party serves the role of offering selective benefits to the regime supporters, can help the dictator co-opt political entrepreneurs that oppose him, mobilize and corral support for the regime. Additionally, it increases the ability of the regime to gather information and intelligence so that redistribution of goods and benefits, and repression are applied discriminately (Svolik 2012; Geddes 1999; Gandhi 2008; Fjelde 2010).

Authoritarian regimes usually co-opt groups by making them join a regime sanctioned front or by allowing parties to exist outside of regime control (Gandhi 2008; Svolik 2012). In 1948, the Polish communist regime forced its major rival, the Polish Socialist Party, into joining the regime and creating the Polish United Workers Party. After 1965, the United Peasant Party, another small private business party, and two Catholic groups were forced to join the united front sanctioned by the Polish ruling party. They were presented to voters as a single electoral list which gave them a small degree of flexibility regarding their loyalty. By allowing a small

flexibility regarding loyalty, the ruling party managed to isolate those who were not willing to join its ranks (Gandhi 2008). Another example that illustrates this concept of cooptation comes from Mexico where President Plutarco Elias Calles (1924-1928) created the National Revolutionary Party (PNR) in order to draw in a single organization all of Mexico's revolutionary leaders, local bosses, and regional political parties. Later on, Lazaro Cardenas (1934-1940) transformed the PNR into the Institutional Revolutionary Party, or PRI, which incorporated and organized peasants and workers into national confederations with the purpose of securing their loyalty through the provision of material rewards, land reform and social legislation (Magaloni 2006).

Political parties help regime elites mobilize popular support for the incumbent regime, while also constraining the elites' choices by binding them to the citizens through networks of patronage (Pepinsky 2014; Magaloni and Kricheli 2010). An intrusive and broad political party has the role of reducing the cost of repression by providing the regime with information about potential opposition (Fjelde 2010). Having a wide and intrusive political party allows the regime to distribute rents and privileges selectively, it helps the regime co-opt or buy-off potential political entrepreneurs, and can attenuate eventual societal shocks by dealing with low-level dissent within the party's ranks. The main strength of a political party in an authoritarian regime resides in its ability to act as an early warning system of any potential opposition. This broad informational network allows the dictator to use tools of concession and coercion discriminately to avoid alienating its core supporters. Also, the party acts as a forum in which the incumbent can negotiate with elites by offering them a share of power in the long run (Magaloni and Kricheli 2010).

2.5 Backlash of repression

Backlash of repression is conceptualized as the possibility of increased mobilization and dissent from the opposition, or security and governmental elites defection to the opposition following government repression. Although the potential of backlash is difficult to assess *ex ante* repressive events, I assume that the government holds information about previous experiences with repression and dissent, and is able to assess whether repression will cause backlash and alienate its support base. Prior to “Bloody Monday” on 28 September 2009, in Guinea the opposition united six political parties, the major trade unions and civil society organizations under the Forum of the Forces Vives of Guinea. On the mentioned date, 157 people were killed during a wide protest march of 50,000 people. Following this event, the movement managed to organize a stay-at-home strike of over 90,000 government workers (Sutton et al. 2014). In 1991, the Algerian military closed the legislature when the Islamic Salvation Front was poised to win a majority of seats in the elections. Despite protests from members of the ruling party, the Front de Liberation Nationale, the military pursued this course of action which plunged the country into civil war (Gandhi 2008).

Besides increases in mobilization against the regime, repression can also backlash against the regime through military and elite defections. These signal to the broader population that the regime is fragmented, which can catalyze further mobilization against the regime. However, regime defections need to be significant and should lead to a cascade of defections for the signal to be strong enough to catalyze mobilization against the regime. If the incumbent has managed to secure the support of large swaths of population through party membership and material benefits, and is able to prevent further defections, the dissenting elites will have a much higher costs when defecting and trying to mobilize resource against the incumbent. In other words, competing outside the regime’s political structures becomes extremely difficult, while

increasing the chances of being selectively targeted by the coercive institutions of the regime. By building a large party regime, the incumbent creates a structure that offers people stakes in the survival of the regime and governing of the country, which even minimal, increases the 'price-tag' associated with opposing the regime. A good example of such a situation is the Communist Party in Poland which could control access to virtually all the valuable resources such as jobs, education opportunities, or housing (Gandhi 2008; Svobik 2012).

2.6 Threat perception

Dissidents' aims and tactics are two of the factors that were proposed to affect threat perception of regimes and its use of repression vis-à-vis opposition movements (Gartner and Regan 1996; Davenport 1995). Here, the threat perception of the regime is influenced by two factors: tolerance for dissent, and unity of the opposition. The former is conceptualized as the level of political and social activity that the government is sanctioning regularly. This could take the form of petitions, community based organizations, or political parties' activity (Levitsky and Way 2010; Chenoweth and Stephan 2011). Once authoritarian regimes come into power, they actively work to homogenize the society, subject them to state discipline and discourage any expressions of difference at a political level (Bernhard and Karakoç 2007). Pre-existing mobilization structures such as trade unions, professional associations, mass-media or various social clubs are replaced or carefully monitored by the state. For example, the Chilean regime of General Pinochet enacted policies that would make political associations and collective action more difficult to organize, to diminish the opportunity for societal demands and re-organized the society around the market (Hagopian 1993). The latter refers to the ability of the opposition (political parties and various non-state organizations) to challenge the government with a set of coherent policy demands. Social campaigns are events that take place outside of regime sanctioning, and a unified set of demands by the campaign enhance the threat

perception by the regime. If the regime is facing a disorganized opposition with numerous, but weak and incoherent organizations, then the regime will feel less threatened as “*incumbents have more to fear from united, broad-based resistance movement*” (Gandhi 2008: xviii). Further, a fractionalized opposition will not be able to threaten the regime’s core constituency as it cannot provide better rents and privileges than the regime. However, if the opposition manages to coordinate and to organize a collective action front, then the regimes will perceive the campaign as more threatening and also will find it easier to further mobilize resources against the regime. During the campaign that brought down Slobodan Milosevic, the opposition managed to coalesce around the Otpor movement and was able to propose a unique challenger to defeat the regime of Milosevic in the elections (Chenoweth and Stepan 2011).

2.7 Killing the united

The decision to respond with lethal repression to a social campaign, in an attempt to dissemble it, will be influenced by the cooptation ability of the regime as an alternative to repression, the potential backlash of such a costly response and the threat perception of the regime. These factors are captured by the interaction between the status of political parties and the unity of the campaign.

Autocracies that banned political parties usually rule with the help of a small coalition, that supports the dictator in exchange of perks and privileges (Bueno de Mesquita et al. 2003). These regimes not only ban political parties, but they also repress violently and indiscriminately any opposition or political activity. For example, the Proceso regime of Argentina engaged in an intensive war of extrajudicial killings and disappearances of opposition members while also closing down the legislature, restricting freedom of speech and press (Pion-Berlin and Lopez 1991). Similarly, shortly after the 1973 coup in Chile, the military closed the legislature and banned political parties. Then, after repressing the opposition, authoritarian regimes without a

political party keep the loyalty of their key supporters through rents and privileges (Bueno de Mesquita et al. 2003; Svobik 2012). Keeping a small ruling coalition content through material and social benefits makes these regimes less concerned about the possibility of lethal repression backfiring against the regime. This happens for two reasons: first, supporters of the regime receive a greater share of regime spoils in exchange of their loyalty. Second, since the campaign cannot offer them any benefits, then these regime supporters are less likely to be involved in the campaign and less likely to be affected by the regime's lethal repression. Furthermore, since the spoils of dividing resources between a small number of actors means a bigger share for the actors invested in the process, they will seek to maintain the status quo, and avoid redistributing resources with members of the social campaign.

Repression was the main tool through which autocracies that ban political parties have consolidated their position, and they will seek to perpetuate this behavior as it proved successful in the past (Davis and Ward 1990). It follows that they will have lower levels of domestic mobilization, and are less tolerant to dissent or anti-systemic behavior (Davenport 1995; Gandhi 2008). Despite the fact that the opposition has a higher available mass for mobilizing resources against the regime, they will need to overcome all the initial obstacles and costs associated with such an endeavor (Kricheli, Livne, and Magaloni 2011). Any deviation from the accepted levels of dissent will be met with repression by regimes without a political party because such opposition is not within the levels of accepted dissent. When the support base of the regime is small, the regime is not concerned about the fact that repression might alienate the population or its core supporters. In these regimes the dictator is more concerned about being challenged from within the ruling coalition (Casper and Tyson 2014). Confronting a prolonged popular campaign might signal the elites that the dictator is weak, and they could coordinate in overthrowing the dictator. Further, a united social campaign shows greater

strength as it managed to overcome the hurdles of collective action in a highly repressive environment and signals regime's inability to hamper their efforts. This will only exacerbate the threat perception of the regime and the likelihood of lethal repression.

Finally, the regime has the option of providing concessions through direct transfers of material benefits, but it cannot co-opt the social campaign as it lacks the institutional framework to do so. The lack of a party through which to co-opt the opposition has several perils. First, the regime has no network to gather intelligence on who to co-opt and who to repress. In other words, the regime cannot distinguish between the groups that need to be co-opted as they are essential for its survival and groups that could be repressed because they do not threaten the survival of the regime. Second, the lack of an institutional avenue for negotiation between politically relevant actors exacerbates this information asymmetry and the potential for conflict.

In comparison, single party regimes have several advantages in dealing with the opposition. They are better able to acquire information about potential opposition, mobilize support for the regime, to distribute rents discriminately to regime supporters, and have lower costs associated with monitoring dissent. The regime obtains support from the population by conditioning the provision of benefits and redistribution of resource through party membership. The co-optation through party ranks allows the regime to have control over citizens' career advancement, their access to state resources (health care, education, housing, etc.) and to condition the provision of benefits to the survival of the regime. Single party regimes rely on a dense network of party membership where most of the population obtains benefits from supporting the regime (Gandhi 2008; Svolik 2012). These regimes use repression to quell any opposition to the regime, but they do so only against groups that were not willing to join the regime's front. For example, Mugabe created a 'de facto single party' regime through massive repression in Zimbabwe (Lewitsky and Way 2010).

Given the widespread intrusion of single party regimes in the social and political life, the emergence of a social campaign is indicative of the regime's support base being weakened. In order for social campaigns to emerge in these regimes, they need to be able to mobilize not only opponents of the regime, but also its supporters. While these regimes tend to allow some degree of regime sanctioned social and political opposition, the emergence of a social campaign outside the regime ranks is perceived as highly threatening. For example, Mao had the One Hundred Flowers Movement which allowed citizens to express their opinion on the communist regime, but it was then followed by the Cultural Revolution which aimed to purge any capitalist and traditional elements of Chinese society, and impose a Maoist tradition. If the campaign manages to have a united set of demands, they pose a higher threat to the regime. However, responding with lethal repression against these campaigns brings about risks of backlash. Precisely, switching from material benefits to violent repression will reveal the regime's viciousness and cruelty, which alienates and antagonizes its support base. Lethal repression is hardly ever discriminate which increases the potential of it spilling over and affecting a wider range of the population. This makes the use of violent repression riskier and problematic for single party regimes. Furthermore, when the campaign is fragmented the regime could also choose to co-opt the factions that can be bought off with material benefits. The factions that refuse to be co-opted will have increasingly difficulty in mobilizing large swaths of the population as it needs to provide better benefits and endowments than the government.

Regimes that allow the existence of political parties are characterized by more political opposition, but usually this is highly fragmented (Magaloni 2006; Levitsky and Way 2010). It does not only oppose the incumbent, but it also competes with other political parties for support, survival and relevance. Also, the regime is used to competing with various political organizations for political relevance and survival. Multi-party regimes have a higher tolerance

for opposition within their polity, but this also leads to a higher potential of mobilization for the opposition (Gandhi 2008; Levitsky and Way 2010; Fjelde 2010). The hybrid between an authoritarian and democratic regime opens up the structures for mobilization by allowing people to form networks of political and social participation³. The emergence of popular campaigns is more facile as other parties have mobilized supporters, they are allowed to participate in contested elections, and there are fewer barriers for mobilization against the regime. Political parties emerge outside the regime because the government failed to co-opt interest groups or political entrepreneurs in their ranks, and they were unable to eliminate them through repression. In other words, by failing to co-opt potential opposition groups to the regime's ranks, the regime reached its co-optation limits. The emergence of additional political parties is due to the fact that the regime is too weak to crush the political aspirations of these opposing groups, and the regime is reliant on them for the survival of the regime.

Mobilization is most likely to occur in these regimes, but the degree of unity in the campaign is a key factor in these regimes. The threat perception of the campaign will be enhanced if the campaign manages to unite a fragmented opposition. Since the regime is used to competing with various groups for political power it will not perceive these as a threat unless they manage to unite behind a campaign with unitary goals. Also, repression is more common in these regimes as the regime is constantly trying to eliminate its opponents (Rivera 2016). In Morocco, the Istiqlal party aimed to enforce its position vis-à-vis King Mohammad V by co-opting as many groups as possible, by having active ties with the largest trade union, and by marginalizing groups that it could not coopt by engaging in political assassinations (Gandhi 2008). Since repression is more present in these regimes, the threat perception coming from a

³ A tabulation table shows that multi-party regimes have in total 587 campaigns (422 violent and 165 violent) compared to 240 for single party regimes (198 violent and 42 non-violent), and 91 campaigns in regimes that ban political parties (81 violent and 10 non-violent).

united social campaign takes precedence as multi-party regimes will seek to quell the opposition. If the opposition manages to unite behind one front, then it becomes more threatening towards the regime as it offers a viable alternative to the regime. The incumbent regime faces higher obstacles in trying to mobilize its support base, and the campaign participants become the enemies of the regime. In this case the regime finds itself in the situation in which if they do not eliminate the threat, the popular campaign has great chances of overthrowing the government. Repression becomes the cheapest and easiest option to destroy the threat to its survival. On the other hand, if the emerging campaign is fragmented then the regime can pursue a policy of divide and conquer to prevent the factions uniting together against the government (Cunningham 2011). A fragmented opposition is less threatening to the regime, and using extensive repression could only cause a backlash in mobilization against the regime.

To conclude, autocracies that ban political parties have no institutional avenues to co-opt the social campaign, have a lower likelihood of repression backlashing against the regime, and perceive higher levels of threat from the emergence of social campaigns compared to single and multi-party regime. A united campaign will be perceived as the most threatening, but even if it loses its unity, the regime will still perceive it as a high threat because of its low tolerance for dissent. This heightened threat perception coupled with no systematic mechanisms for co-optation and low likelihood of backlash makes them more less likely to refrain from using lethal repression compared to single and multi-party regimes. Further, single party regimes perceive united campaigns to be threatening to their survival, given that they managed to mobilize outside regime structure, yet this threat perception will be mitigated by the high potential for backlash of repression and the possibility to co-opt the opposition. Single party regimes are better equipped to co-opt factions of the campaign as they become more fragmented because they can offer more benefits than the challengers. In comparison, multi-party regime will be

more likely to use repression against united social campaigns because these were able to unite a fragmented opposition. Despite having avenues for political participation where the opposition can challenge the regime, the emergence of a united social campaign in multi-party regimes is indicative of a high anti-regime feeling in the population and it's perceived as highly threatening. The hypotheses below summarize the argument:

H1: Authoritarian regimes that ban political parties are less likely to refrain from lethally repressing social campaigns compared to single and multi-party regimes, regardless of the degree of unity within the social campaign.

H2: As social campaigns become more fragmented, single party regime are more likely to refrain from using lethal repression against them compared to multi-party regimes.

2.8 Methodology

The unit of analysis of this paper is social campaign/country-year. The sample contains of 95 countries and 177 social campaigns. The cross-sectional time-series research design of this paper seeks to uncover the variation over time of government responses towards social campaigns as governments' intensity of repression and their institutions vary over time (Cunningham 2011; Chenoweth and Lewis 2013).

The data on social campaigns will be culled from the Nonviolent and Violent Campaigns and Outcomes (NAVCO) data project (Chenoweth and Lewis 2013). NAVCO 2.0 collects data on 250 nonviolent and violent insurrections between 1945 and 2006. Social campaigns are conceptualized as a series of observable, continuous, purposive mass tactics or events with a maximalist goal (overthrow the government, expel foreign occupation, or self-determination). These campaigns have at least 1000 observed participants and a coherent organization linking tactics to one another over time. Data on authoritarian regimes is extracted for the Cheibub, Gandhi, and Vreeland (CGV) (2010) data set. This dataset is used due to the

wealth of information it offers about institutions in authoritarian regimes, and its strict coding decisions (Cheibub, Gandhi, and Vreeland 2010). Autocracies are coded as those regimes in which at least one of the following conditions is *not* met: both the legislature and the executive are elected, multiple political parties exist outside the influence of the regime and compete in elections, and the transition of executive parties has been peacefully as result of elections (Maves and Braithwaite 2013).

2.8.1 *Dependent variable: Regime repression*

The dependent variable takes a value of 1 if the regime takes no action, concedes to demands, makes verbal or threatening actions towards the opposition, or if it harasses and imprisons campaign members with no intention to kill them. It takes a value of 0 if the regime engages actions with the intent to kill dissidents, if it tortures or uses severe beatings, and mass violence against the campaign participants⁴.

2.8.2 *Independent variables*

The key independent variable is culled from the CGV data (Cheibub, Gandhi, and Vreeland 2010), which provides information about the *de facto* status of political parties. The variable measuring the *de facto* status of political parties is a three-category variable which takes the value 0 if political parties are banned, a value of 1 if there is only one party (the regime's party or front), and a value of 2 if multiple parties exist outside the regime front. From this variable, three dummy variables will be generated for each different status. Constituent terms will be generated by interacting each dummy variable with the variable that measures the unity of the social campaign. This variable is culled from NAVCO 2.0 dataset (Chenoweth and Lewis 2013). The *Intensity of Conflict Within the Campaign* variable measures the nature and

⁴ A more complete discussion on the dependent variable can be found in the online Appendix.

degree of conflict amongst groups, factions and leaders within a social campaign. It takes the following values:

- (0) - Seemingly united.
- (1) – Cooperation with moderate disunity (ideological or policy disagreements).
- (2) – Verbal or active competition among groups, short of physical violence.
- (3) - Active competition among groups with violence.

2.8.3 Control variables

In the literature on state repression several covariates have been found to affect the level of repression government use against their citizens (Davenport and Armstrong 2004; Nordås and Davenport 2013; Hill and Jones 2014). However, these covariates only offer us information about general patterns of repression across time, space, context, and operationalization (Nordås and Davenport 2013; Hill and Jones 2014). Hence, selecting control variables from this literature would not be appropriate as this study focuses on how actors' characteristics shape repression towards social campaigns. The control variables are selected from the emerging literature on nonviolent social campaigns (Chenoweth and Stephan 2011; Chenoweth and Lewis 2013). A dummy variable measuring the type of campaign (nonviolent/violent) is included as nonviolent campaigns have a higher probability of achieving success, and because the risk of repression backlash (or political jiu-jitsu) is higher for these campaigns (Sutton, Butcher, and Svensson 2014). International support or sanctions against the regime are expected to influence the choice of governments when deciding how to respond to social movements (Chenoweth and Stephan 2011). Furthermore, campaigns with external support are more likely to be successful, but they are also more susceptible to repression because states do not like other international actors interfering with their internal affairs (e.g. Otpor movement against Slobodan Milosevic in Serbia) (Chenoweth and Stephan 2011). Governments tend to use a

combination of repressive and concessive measures when being openly challenged (Franklin 2009) which determines the inclusion of a variable measuring the extent of concessions obtained by the campaign. A variable measuring the duration of the campaign was included as longer campaigns show that they were better able to survive government actions to quell their activity (Chenoweth and Stephan 2011). The inclusion of a dummy measuring the Post-Cold War era has been included because this period has brought a remarkable transformation of internal conflicts and state structures (Kalyvas and Balcells 2010). The GDP/capita measure is included to account for state capacity (Gleditsch 2002; Hendrix 2010) while the population size is accounted for as more populous countries are more likely to experience dissent against the governments (Poe et al. 1999)⁵. Controlling for civil war is important as previous use of violence against dissidents and/or the experience of a civil war might affect both the use of repression and the institutional structure of the regime (Davis and Ward 1990; Davenport 1996). Table I contains the summary statistics for all the variables used to estimate the models.

2.8.4 Model specification

The paper uses a logistic regression model for estimation given the dichotomous nature of the dependent variable, while it reports robust standard errors clustered on countries to correct for the bias due to nonconstant variances (Wooldridge 2002). The first model includes only the key independent variables, the second includes only the control variables, while the third model includes all the variables discussed in this section.

⁵ Both measures have been logged due to their skewed distribution, and lagged to avoid any endogeneity or simultaneity issues. The rest of the variable are not lagged as their value at time t might affect the propensity of regimes to refrain from lethal repression, but also the unity of the campaign. Since government responses (use of lethal repression) is dependent on the social campaign characteristics, then the characteristics of the campaign at time t are more salient as a confounder, compared to its characteristics at time $t-1$.

Table 2.1 Summary statistics

VARIABLES	(1) N	(2) Mean	(3) Std. dev.	(4) Min	(5) Max
Incidence of civil war	945	0.688	0.464	0	1
Nonviolent campaign dummy	945	0.230	0.421	0	1
Campaign unity	934	1.069	1.074	0	3
External regime support	850	0.582	0.493	0	1
External campaign support	892	0.596	0.491	0	1
International sanctions for repression	921	0.214	0.410	0	1
Concessions level	938	0.744	1.272	0	4
Population natural log t-1	945	9.983	1.308	6.366	13.92
GDP/capita log t-1	922	7.505	0.870	4.965	10.27
Single party regime	945	0.254	0.436	0	1
Multi-party regime	945	0.621	0.485	0	1
Single party* Conflict within campaign	934	0.232	0.652	0	3
Multi-party* Conflict within campaign	934	0.655	0.989	0	3
Length of campaign	945	8.257	9.238	0	48
Post-Cold War	945	0.260	0.439	0	1
Non-lethal Repression (DV)	934	0.141	0.349	0	1

2.9 Empirical analysis

Table II summarizes the main results. The interaction term between the single party dummy variable and campaign unity is not statistically significant at conventional levels in Model 1 and 3. Similarly, the interaction term between multi-party and campaign unity does not reach conventional levels of statistical significance in Model 1, but it reaches a high level of statistical significance in Model 3. Furthermore, the two dummies for one party and multiparty regimes have a positive, statistically significant effect on the likelihood of refrain from lethal repression in Models 1 and 3. In other words, compared to regimes that ban political parties, single and multiparty regimes are more likely to refrain from using lethal repression. This is consistent with the expectations of hypothesis 1. Campaign unity does not reach statistical significance in neither of the last two models. This indicates that campaign unity, by itself, does not affect regimes decision to refrain from lethal repression. From the selected

control variables, the terms for non-violent campaigns, external support for the campaign, international sanctions, the size of the population, and concessions levels do not have a statistical significant effect on the outcome. The variable measuring whether the regime receives external support has a negative impact on the likelihood that regimes will refrain from lethal repression. Furthermore, post-Cold War regimes tend to be more likely to refrain from using lethal repression according to the extended model, while its effect is not statistically significant in Model 2. Regimes with higher levels of GDP/capita seem to more likely to refrain from using lethal repression. Longer campaigns are more less likely to avoid lethal repression. This happens because longer campaigns are perceived as more threatening by autocracies. Unsurprisingly, experiencing a civil war concomitantly with a social campaign makes refrain from lethal repression less likely as autocracies are better equipped to respond with lethal repression.

Table 2.2 Political parties' status, campaign unity and lethal repression, Logistic regression models, 1950-2006.

VARIABLES	(Model 1) 1=no lethal repression	(Model 2) 1=no lethal repression	(Model 3) 1=no lethal repression
Single party* Campaign unity	-0.787 (0.847)	--	-0.953 (0.917)
Multi-party* Campaign unity	-1.064 (0.692)	--	-1.808** (0.865)
Single party regimes	3.152* (1.732)	--	3.590** (1.541)
Multi-party	3.055* (1.595)	--	3.468** (1.436)
Campaign unity	0.729 (0.715)	-0.187 (0.217)	1.236 (0.886)
Nonviolent campaign dummy	--	0.406 (0.425)	0.581 (0.409)
External regime support	--	-0.706* (0.364)	-0.703* (0.379)
External campaign support	--	-0.339 (0.413)	-0.359 (0.386)
International sanctions for repression	--	-0.207 (0.535)	0.0364 (0.507)
Post-Cold War dummy	--	0.562 (0.413)	0.886** (0.416)
Concessions level	--	0.146 (0.120)	0.130 (0.120)
Population natural log t-1	--	0.0733 (0.144)	0.0183 (0.126)
GDP/capita natural log t-1	--	0.473** (0.217)	0.477** (0.188)
Length of campaign	--	-0.0759*** (0.0251)	-0.0745*** (0.0231)
Incidence of civil war	--	-1.563*** (0.335)	-1.700*** (0.349)
Constant	-4.609*** (1.633)	-4.747** (2.403)	-7.704*** (2.739)
Aikake Information Criteria	620.40	470.27	449.23
Bayesian Information Criteria	648.47	526.41	524.09
Observations	795	795	795

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

2.9.1 Substantive effects

The coefficients of a logistic model cannot be interpreted directly, nor the coefficients of the interaction terms (Brambor, Clark, and Golder 2005; Berry, Golder, and Milton 2012). Henceforth, marginal effects plots will be estimated for Model 3 in order to see the direction of the relationship between repression and campaign unity in different authoritarian settings⁶. Figure 2 presents the marginal effects for the difference in predicted probabilities for authoritarian regimes that ban political parties and single party regimes. Compared to single party regimes, regimes that ban political parties tend to about 2.5% less likely to refrain from using lethal repression against seemingly united social campaigns, but this effect vanishes as campaigns become less united with active competition among discrete groups. As expected, autocracies that ban political parties are less concerned about backlash, they do not have the institutional capacity to co-opt factions of the campaign, and have a higher perception of threat compared to single party regimes. Similarly, in Figure 3 we can observe that compared to multiparty regimes, autocracies that ban political parties are less likely to refrain from lethal repression, yet this difference disappears once the campaign loses its unity. It happens because regimes that ban political parties have a lower tolerance for anti-systemic behavior, and they will seek to immediately destroy any activity threatening the survival of the regime.

In Figure 4, it can be observed that compared to multiparty regimes, single party regimes are not less likely to refrain from lethal repression, but they are about 4% more likely to refrain from using lethal repression as the campaign becomes more fragmented. This happens because single party are better equipped in coopting groups from a fragmented campaign. These results offer some support for the conditional hypotheses developed in the

⁶ The results are robust to various model specifications and alternative measures. The discussion of the robustness checks are not included in the main text due to space constraints. See the appendix for discussion and results.

theoretical part of the paper. First, the results indicate that autocracies that ban political parties are less likely to refrain from lethal repression compared to single and multi-party regimes. This is supported by the fact that the coefficients for the single and multiparty dummy variables are positive and statistically significant compared to the baseline of banned political parties. However, the marginal effects from Figure 2 and 3 indicate that, contrary to expectations of hypothesis 1, the unity of the campaign mediates the difference in likelihood of refraining from lethal repression for no-party regimes compared to single and multi-party regimes. Second, single and multi-party regimes seem to be equally likely to refrain from using lethal repression against united social campaign, but as the campaign loses its unity single party show more restraint towards social campaigns compared to multi-party regimes. The restraint shown by single party regimes against fragmented social campaign can be explained by the fact that they are better able to co-opt splinter groups as compared to multi-party regimes which are concerned that further concession could strengthen the opposition too much.

The findings discussed above do not represent a causal effect as the analysis is based on observational data and the exogeneity assumption of the treatment (i.e. interaction between campaign unity and status of political parties) cannot be upheld theoretically or empirically. First, a potential sources of endogeneity bias could stem from the effect of political parties' status on campaign unity. In other words, the use of political parties, as tool for mass co-optation (Gandhi 2008; Svolik 2012), can impede the ability of dissidents to mobilize and coordinate their actions and objectives. This would happen because dissidents would need to produce shifts in the mobilized party support base of the regime. Then, if they cannot offer better incentives and benefits than the regime, then their ability to maintain their unity would be affected. Yet, while status of political parties might influence the ability of campaigns to keep their unity, the status of political parties is not the sole determinant of campaign unity.

Second, it is unlikely that campaign unity is endogenous to expectations of repression. I claim this because campaign unity captures the extent to which there is agreement and consensus between the organization forming the campaign. Endogeneity would be a major concern for campaign unity if it were captured by the number of organizations forming the campaign. In this case, it could be that campaigns with more organizations (“disunited”) have developed a de-centralized network with the very purpose to avoid repression. An example of this situation was the Otpor movement opposing Slobodan Milosevic’s rule in former Yugoslavia. This campaign has purposely divided its organizational branch in numerous smaller organizations so that repression against one of these organizations would not affect other organizations involved in mobilization and coordination of tactics.

Third, repression captures state responses to social movements, not general levels of repression. Then, while decisions to refrain or engage in lethal repression can be affected by institutionalization, it does not depend entirely on it. Hence, I do not believe repression to be endogenous to political parties’ status. The previous three arguments lead me to believe that the reported effects of political parties’ status and campaign unity on likelihood to refrain from lethal repression are not affected by major endogeneity bias, at least not more than other studies based on observational data.

Another concern regarding these results is the potential of post-treatment bias after the inclusion of the control for campaign type (violent/non-violent). Post-treatment bias would be present if the treatment (interaction between political parties’ status and campaign unity) affects the value of the control variable (violent or non-violent campaign) (Gelman and Hill 2006). In other words, the interaction between political parties’ status and campaign unity should affect whether a campaign is violent or not. It is possible that the status of political parties might affect the violent or nonviolent character of the campaigns. This could happen due to the fact that

single party regime have a bigger mobilized support base which reduces the capacity of the campaign to mobilize for nonviolence. This rests on the argument that campaigns with limited opportunities for mobilization are more likely to use violent tactics (Dahl et al. 2015). However, there is no evidence that campaign unity affects its prospects to use violence or to stick to nonviolent tactics. Since, only one component of the treatment (political parties status) has an effect on this control variable (e.g. violent/non-violent campaign), while the other does not, I would expect post-treatment bias not to be a major concern.

Figure 2.1 Marginal effects for the difference in repression for no party and single party regimes.

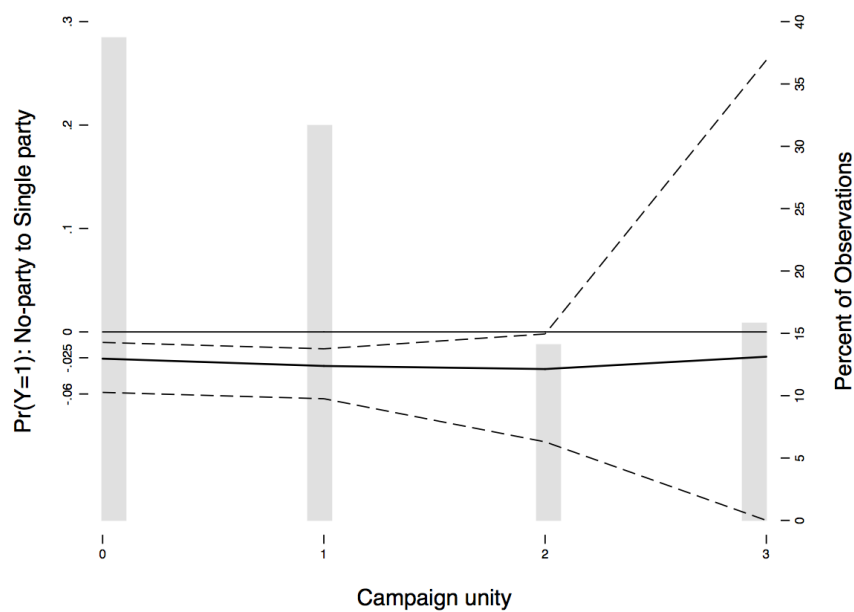


Figure 2.2 Marginal effects for the difference in repression for no party and multi-party regimes.

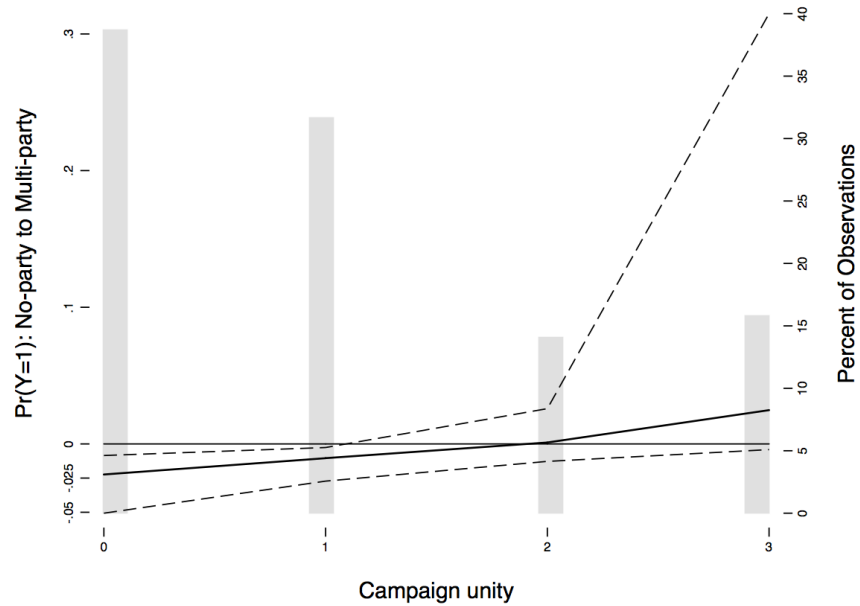
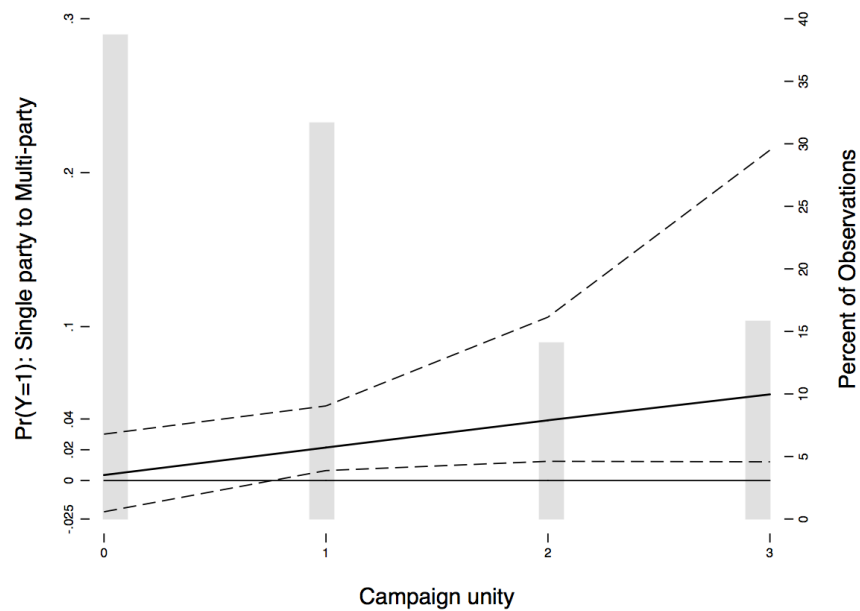


Figure 2.3 Marginal effects for the difference in repression for single party and multi-party regimes.



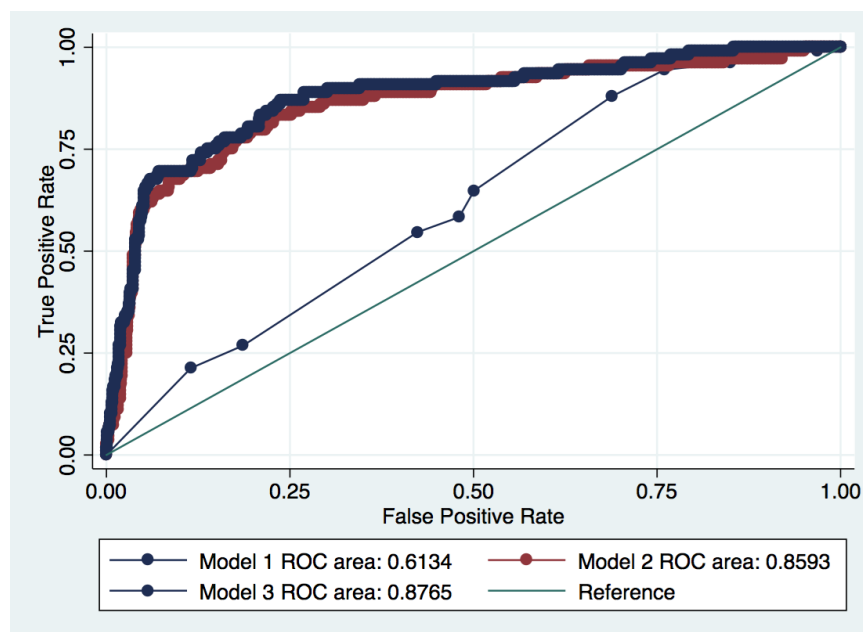
2.9.2 Models assessment

The previous section of the empirical analysis was used in order to visualize the direction of the relationship between repression, status of political parties and campaign unity. Ward, Greenhill and Bakke (2010) argue that the conflict literature is overly focused on finding statistical significance. This can be misleading as very often some variables that seem to improve our understanding of conflict processes actually bring very modest improvements in our ability to predict conflict (Ward, Greenhill and Bakke 2010). Henceforth, we need models that have high predictive power in order to be able to generalize our findings to out-of-sample predictions.

One method to assess the in-sample predictive power of a probit or logit model is a Receiver Operator Characteristic (ROC) plot which shows the relationship between the rate of false positives (the number of incorrectly predicted instances of lethal repression divided by the total number of cases where lethal repression did not occur), and the rate of true positives (the number of cases where lethal repression occurred) over the entire range of possible thresholds. The predictive power of the model can be inferred from the size of the area between the x-axis and the ROC curve. It ranges from 0.5 (in case of a non-predictive model which is no better than chance) to 1 (for a perfectly predictive model) (Fawcett 2006). The advantage in using the ROC curve stems from the fact that it is dimensionless, which means that it can be used to compare the predictive power and accuracy of different models. Furthermore, it is not dependent on the base rates of occurrences, but it depends only on the accuracy of the model (Ward et al. 2010). It could entirely be possible that a good model for a dependent variable with a 10% occurrence rate will be better than another model for a different dependent variable that has a much higher base rate. In other words, it is crucial how well the model can distinguish the events from non-events, no matter their ratio to one another is (Ward et al. 2010; Fawcett 2006).

This point is extremely salient for the current project since the outcome variable in Model 2 and 3 has a rate of 687 cases of lethal repression and 108 cases of restraint from using lethal repression. Figure 5 shows the area under the ROC curve for the three logistic models. Model 1 has an area of 0.61 under the ROC curve while the control variables model (Model 2) has an area of 0.85 under the ROC curve. The extended model has an area of 0.87 under the ROC curve which makes it the model with the highest predictive power. Although the control variables model has a high predictive power, accounting for status of political parties and campaign unity increases even further its ability to separate between events and non-events.

Figure 2.4 ROC plots for Models 1, 2 and 3 from Table 2.2

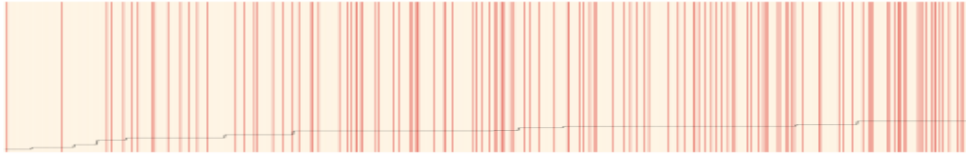


Separation plots are another method that allows one to assess the fit of model with a limited dependent variable (logit/probit or ordered logit/probit) Greenhill, Ward, and Sacks (2011). The advantage of using this approach is that it provides a quick visual summary of the

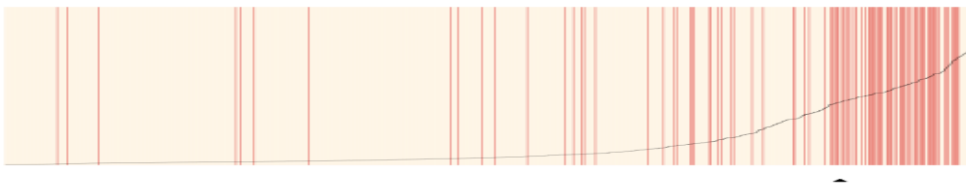
distribution of events and non-events in the data, it illustrates whether high predicted probabilities actually experience the event, displays clusters of false positives and false negatives, and it permits a direct comparison between different models. Greenhill, Ward and Sacks (2011) argue that when evaluating the predictive power of models with categorical outcomes, it is important to see to what overall extent the dark lines are separated from the light lines. Figure 6 displays the separation plots for the logit models found in Table II. The separation plot for model 1 shows a slightly random distribution of events and non-events (lethal and non-lethal repression) without much clustering to the right side of the plot, while the predicted probabilities line is quite high. On the other hand, model 2 and 3 do a better job in separating events from non-events, with most of the events clustering to the right side. The predicted probabilities line has an upward trend that increases consistent with the occurrence of events. More importantly, we can see that model 3 does a better job in separating events and non-events with lower predicted probabilities as the cluster of events on the left in the separation plot for model 2 tend to move to the right in the separation plot of model 3 which has less clustering of events on the left.

Figure 2.5 Separation plots for models in Table 2.2

1. Separation plot, Model 1, Table 2.2.



2. Separation plot, Model 2, Table 2.2.



3. Separation plot, Model 3, Table 2.2.

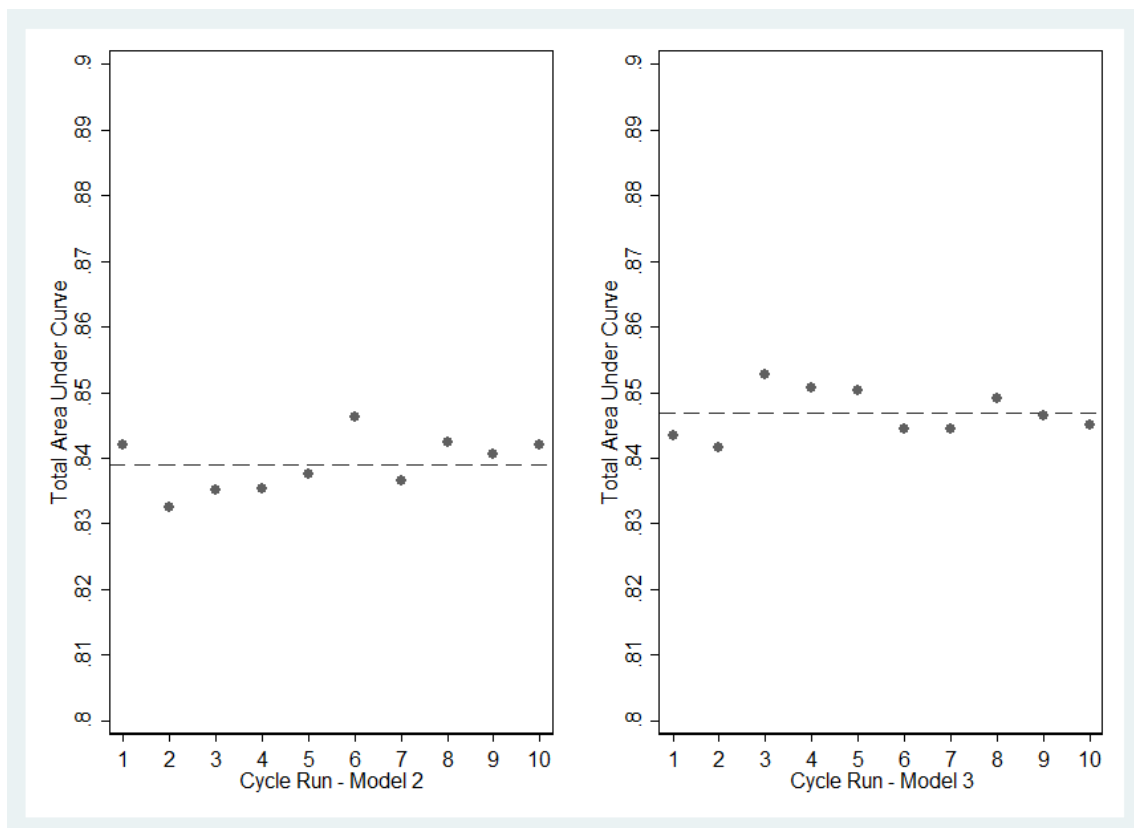


The two methods of assessing the in-sample predictive power of the models might be misleading because adding additional variables to a model could lead to over-fitting (Beck, King, and Zeng 2000). To account for this, a four-fold cross-validation quasi-experiment has been setup for model 2 and 3. This method randomly divides the sample into subsets, and then all but one are pooled together to estimate the preferred model. The remaining set is subsequently used to test the predictive power of the model. The models would be successful in capturing the underlying relationship between the dependent and independent variable if they could perform well when the models would be used on a previously unseen dataset. In other words, if the models simply describe the relationship that exists in the data without capturing

the underlying causal relations then their ability to make correct predictions in the new dataset should be much poorer (Beck, King, and Zeng 2000; Ward, Greenhill, and Bakke 2010). According to the results found in Figure 7, model 3 has an AUC for the out-of-sample predictions of 0.84, while model 2 has an AUC of 0.83. These results show the better predictive power of the models is not due to over-fitting, and including the status of political parties and campaign unity increases the out-of-sample predictive power of the models.

Figure 2.6 Four-fold cross-validation simulation results for Model 2 and 3 from Table

2.2.



2.10 Discussion and conclusion

This paper examined how the interaction between the status of political parties and social campaign unity influenced authoritarian governments' decision in refraining from using

lethal repression against social campaigns. The main argument stated that autocracies' decision to refrain from using lethal repression against social campaigns is a function of their ability to co-opt the opposition, the backlash potential of repression and the threat perception of the campaign by the regime. Further, the paper proposed that the interaction between the status of political parties under dictatorship and degree of unity within the campaign capture these elements, and developed conditional hypothesis on their interaction.

The empirical analysis offered support to the theoretical expectations regarding the effect of the interaction between the status of political parties and campaign unity. Precisely, it showed that authoritarian regimes that ban political parties are less likely to refrain from using lethal repression against social movements. Moreover, the results also indicate that united social campaigns are the most likely to be repressed by autocracies without political parties, but that difference fades away as campaigns become more fragmented. This could be explained by the fact that using lethal repression against united social campaigns is costlier for single and multiparty regimes compared to autocracies that ban political parties. However, when the campaign becomes fragmented the costs of repression are low regardless of political parties' status. Next, the results of the paper indicate that single party regimes are more likely than multi-party regimes to refrain from using lethal repression as social campaigns become more fragmented. This finding comes to offer support to the argument that single party regimes could use other means through which they engage the opposition, and they find it easier to use cooptation when the opposition is divided. The intuition behind this point is that unitary campaigns have a well-defined goal and more discipline (Chenoweth and Stephan 2011), but as soon as these are lost they become more vulnerable to being bought off with material benefits.

These findings shed some light on the empirical puzzle posed at the outset of this paper. Syria and Libya incrementally increased their repressive efforts because they lacked the institutional capacity to coopt the opposition. Furthermore, their level of acceptance for anti-systemic behavior was quite low considering their previous reliance on repression for quelling dissent (Pargeter 2012). In the case of Syria, the factionalist nature of regime cooptation allowed al-Assad to keep the loyalty of key members of the ruling elite while repressing the wave of protesters. Furthermore, the fact that the opposition lost its unity and nonviolent discipline only exacerbated the use of lethal repression by the state (Bartkowski and Kahf 2013). Conversely, the multi-party nature of the political system in Egypt and Yemen, their higher tolerance for dissent, and the unity of the protesters increased the costs associated with lethal repression, and subsequently led to regime change. Although the causal impact of the mechanism is hard to establish, these findings can be used as a framework of understanding better how the interaction between actors and their characteristics affect the likelihood of regimes using lethal repression against protesters. Future research could further explore how the interaction between actors and their characteristics shape outcomes of dissent (regime change, democratization, leader exit) and their resilience under heavy repression. Next, the methods used to assess the models' predictive power showed that a model that takes into consideration the actors' characteristics are better in differentiating between events and non-events. An important implication arises for future empirical research on contentious politics. More disaggregated data on repression and concessions needs to be collected so that researchers can understand better how governments change their responses towards maximalist claims, and how they choose between these different avenues of action. Currently, our ability to develop and test more sophisticated theories of government-dissident interactions are hindered by the lack of reliable data on government responses towards maximalist claims.

2.11 Appendices

2.11.1 *Institutional heterogeneity in authoritarian regimes*

Collapsing authoritarian institutions into distinct and discreet categories represent a shortcoming of current research as autocratic regimes display great diversity in their institutional make-up (Svolik 2012; Wilson 2014). Collapsing regimes in ideal, discreet types could lead to problems such as divergent findings regarding the occurrence of conflict, it is sensitive to outliers, and can ignore the role of certain institutions (Wilson 2014). Henceforth, the paper takes into consideration the institutional heterogeneity when unpacking the conditions under which authoritarian governments choose to engage in lethal repression against social campaigns. The decision to look at how the status of political parties affect propensity towards repression relies on the intuition that political parties are the institution through which the regime and the opposition mobilize their support bases, and political parties are the most inclusive institution used for cooptation (Svolik 2012; Levitsky and Way 2010). Consider the regime of Hafez al-Assad which between 1970 and 2000 ruled via a single party, the Baath party. During this time, key positions in the government and the military were held by military officers that supported Hafez al-Assad in his takeover of the party in 1970. So, one could conclude that the Syrian regime was ruled by the military and maintained a political party. Until his death in 2000, Hafez al-Assad was the undisputed leader of the government, the military, and the Baath party while building a personality cult inspired by Stalin (Svolik 2012). This example illustrates that the Syrian regime under Hafez al-Assad could be characterized at the same time as personalistic, single party, or military.

Geddes, Wright, and Frantz (2014) and Cheibub, Gandhi, and Vreeland (2010)⁷ cross-national datasets on political regimes, and their institutions offer scholars massive information about regime types and characteristics of existing institutions. Despite differences in their coding decisions, and divergent coding of regimes as democratic or autocratic, the problem of great heterogeneity in institutions can be observed when comparing the two datasets⁸. Figure 1 below shows annual observations for the period 1950-2006 of the status of parties in what Geddes, Wright and Frantz (2014) describe as dominant-party regimes. These regimes are defined as regimes in which control over policy, leadership selection, and the security apparatus is in the hands of a ruling party. This conceptualization offers information about the characteristics of the leadership and how exclusive the regime is, but it fails to provide information about whether other political organizations exist outside the state's structure, or if there are existing political networks. As Figure 1 shows, there are 817 regimes which are coded as dominant party regimes which still have political parties existing outside the regime front. This is quite a significant number considering that there are 1189 cases in which both datasets have been coded only a single party⁹.

The GWF data also codes personalistic regimes in which control over policy, leadership selection, and the security apparatus is centered on an individual dictator. Figure 2 displays annual observation for the same period for the status of political parties in personalist regimes, while Figure 3 and 4 display the same information for military regimes and monarchies. As it can be seen in Figure 2, although power is concentrated in the hands of the dictator in personalist

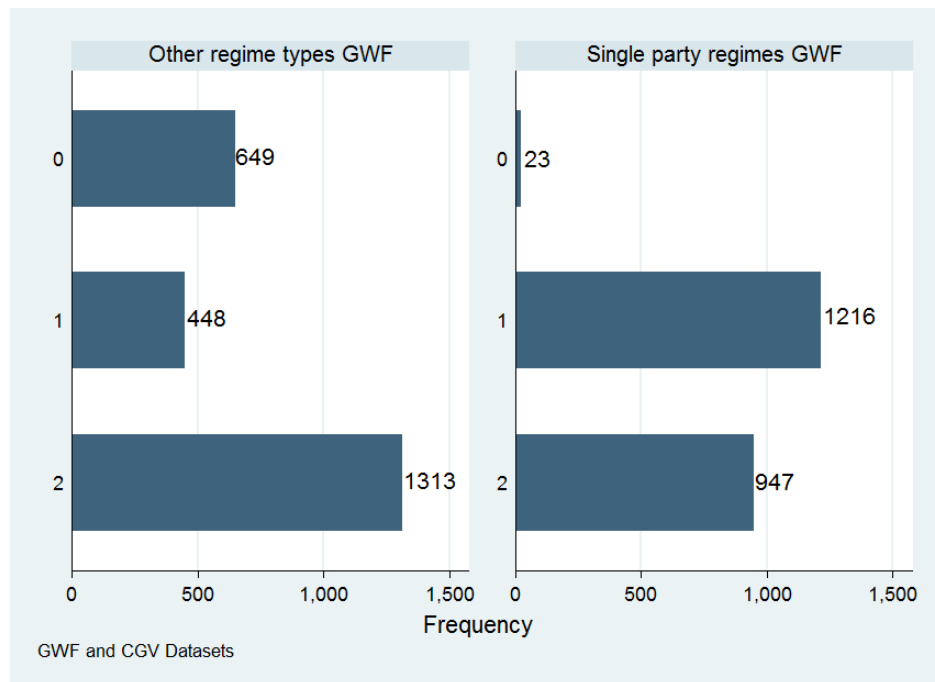
⁷ Geddes et. al's (2014) dataset will be referred as GWF, while Cheibub et. al's (2010) dataset will be referred as CGV.

⁸ The distribution of the annual observation regarding the status of political parties in military and monarchic regimes (Geddes et al. 2014; Cheibub et al. 2010) can be found below.

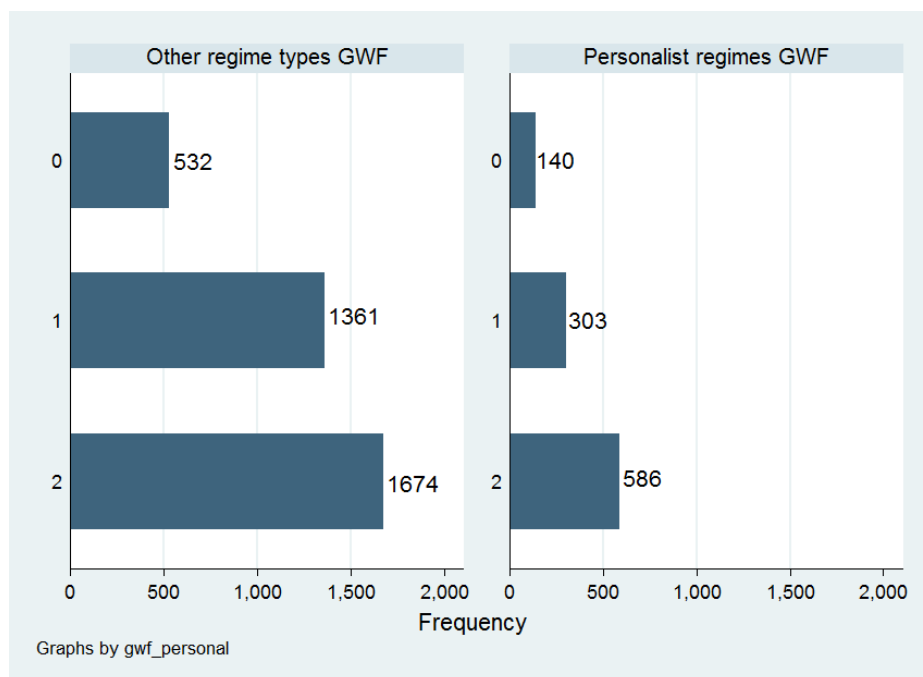
⁹ The legend for Figures 1 to 4 is the following: 0=political parties are banned; 1=single party exists; 2=multiple parties exist outside the regime front.

regimes, there are a very significant number of regimes in which political parties exist outside the regime front. Using personalist regimes for the current paper would deprive the study from the key information about pre-existing networks that could explain mobilization potential against the regime. These typologies offer information about the concentration of power in the hands of the dictator or the party, but once again it does not tell us how much anti-systemic activity or competition exists against the regime. One of the best examples to illustrate this is Nasser's attempts to solidify his power base by outlawing political parties, and forcing the Muslim Brotherhood to transform into a social organization (Perego 2014). Despite the restrictions imposed later on by the various Egyptian autocrats, the Muslim Brotherhood used its network to mobilize the masses against the Mubarak regime during the Arab Spring (Perego 2014).

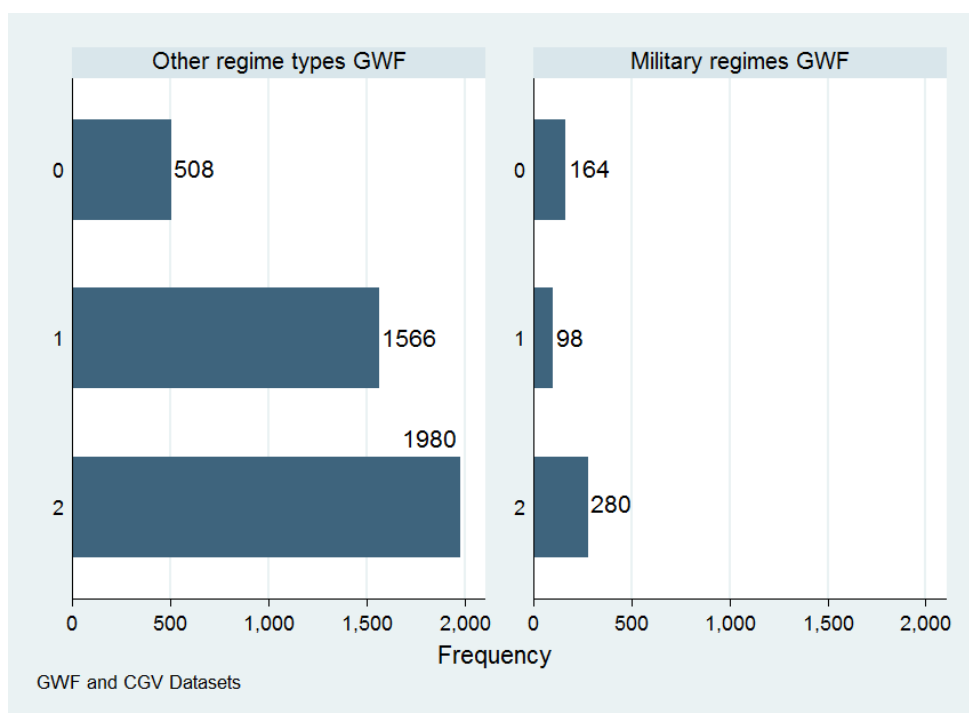
Appendix 2.1 Status of political parties in dominant/single party regimes.



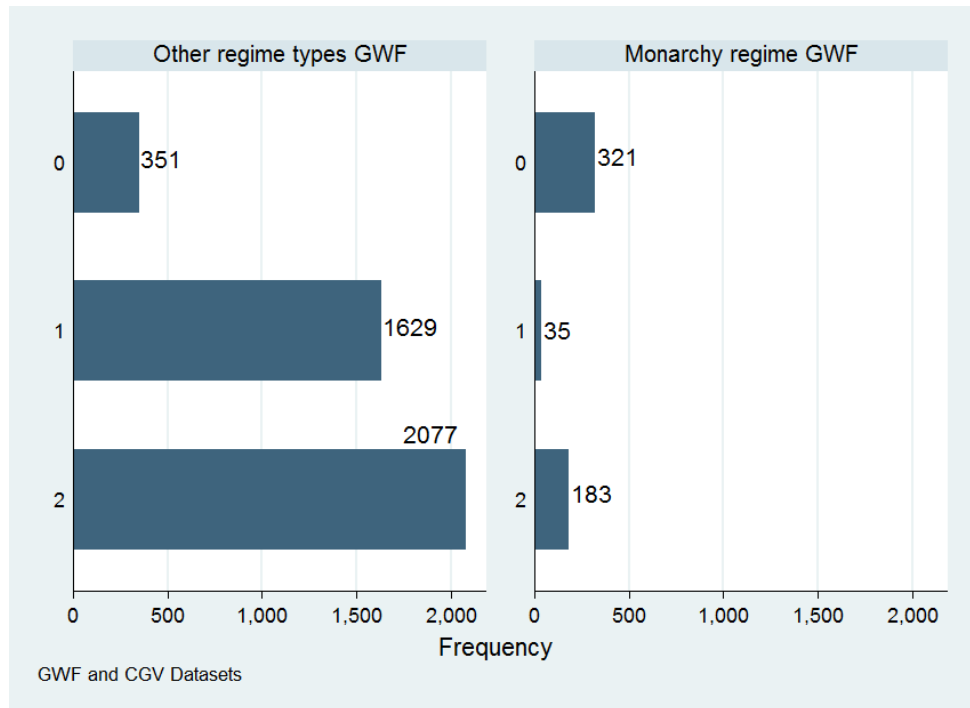
Appendix 2.2 Status of political parties in personalist regimes.



Appendix 2.3 Status of political parties in military regimes.



Appendix 2.4. Status of political parties in monarchies.



Appendix 2.5 Distribution of social campaign in authoritarian regimes based on political parties' status.

Political parties status	Violent campaigns	Nonviolent campaigns	Total
Banned	81	10	91
Single party/Regime front	198	42	240
Multi-party	422	165	587
Total	701	217	918

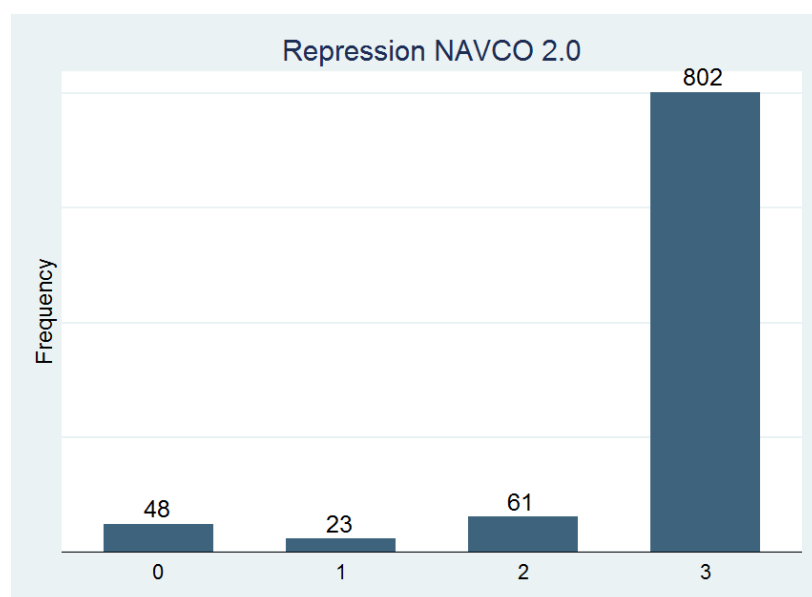
2.11.2 Dependent variable

The variable measuring repression found in NAVCO 2.0 is called *State Repression Episode(s)* (Chenoweth and Lewis 2013). This variable measures the most repressive activity

or episode undertaken by the regime as a response to the campaign's activity. It looks at repression from the campaign's perspective, and it focuses on peak events in which the government uses its coercive apparatus, economic fines and taxes, and the justice system to quell the active dissent. The variable takes the following values:

- (0) No repression – no actions taken by the state, appeasing or surrendering to the campaign, making full concessions, signaling intent to cooperate or showing support.
- (1) Mild repression – verbal or threatening actions, expressing intent to engage in conflict, use of economic sanctions against the opposition.
- (2) Moderate repression – physical or violent action aimed at the campaign, harassing and imprisoning campaign members, no intention to kill.
- (3) Extreme repression – actions with the intent to kill the dissidents, torture or severe beatings, and mass violence.

Appendix 2.6 Frequency of repressive events directed towards social campaigns



The use of this variable as the dependent variable would be problematic because it does not have much variation between categories. Figure 3 shows the distribution of the *State Repression Episode(s)* variable. As can be seen in the figure above, governments tend to respond with lethal repression in more than 80% of the cases. Hence, the dependent variable was recoded in a dummy variable where instances of lethal repression will take a value of 0, and 1 otherwise. Recoding the dependent variable in a dichotomous indicator is theoretically driven: social campaigns have a political objective and their actions threaten directly the survival of the regime. Ignoring or not responding in any way to these movements would show that the government is weak, is afraid of the consequences of its actions, and it expects more mobilization against the regime. The use of non-lethal methods of repression, such as threatening statements, economic and social sanctions, or standard crowd dispersal tactics (tear gas, clubs, water cannons, or even arrests) are standard even for democracies, and are not particularly costly politically or socially (Davenport 2007a; Davenport 2007b). Conversely, the decision to engage in repression with the intent to physically eliminate the opposition bears great costs and has greater political and social implications for the government engaging in such behavior (Schock 2005; Chenoweth and Stephan 2011; Sutton, Butcher, and Svensson 2014).

2.11.3 Robustness checks

Security and elite defections might be a confounding factor in autocracies' decision to use lethal repression against social campaigns. A ruling elite that is splintered and loses members becomes more vulnerable to increased mobilization. In this case it either increases the extent of repression against the social movement or it allows some degree of political competition by allowing the formation of political parties. Furthermore, elite defections could create a rallying effect from the social campaign, strengthening its cohesion. On the other hand, security defection might hinder the ability of the government to repress dissidents which would

only increase the degree of mobilization on behalf of the social campaign because the risks associated with dissent are greatly reduced. Controlling for these two additional factors, does not change in any way the main results reported in the paper. Table 2.7 from Appendix contains the newly estimated model. The interaction between multi-party regime and campaign unity becomes statistically significant, while the rest of the variable maintain their sign and level of statistical significance. Neither security defections nor elite defections seem to have any effect on the likelihood of using lethal repression. Furthermore, the size of the campaign could be considered another measure of the threat level towards the government survival. Accounting for the size of the campaign does not change the main results reported in the paper. The newly included term for campaign size does not achieve statistical significance.

As previously discussed in the appendix, authoritarian regimes display great heterogeneity in their institutional makeup. While this paper focuses on the role of political parties in how authoritarian governments respond to social movements, there is a plethora of institutions that can be used by the government to sanction social and political activity within their borders. Governments differ in the type of activity they allow, what tools they use to restrict the activity of the opposition or how they choose to determine the population in supporting them, or at least not challenge them (Davenport 2007a; E. Frantz and Kendall-Taylor 2014). These more general differences in how the government chooses to sanction the opposition's activity can be a potential confounding factor as it might influence differently dissidents' decision on whether and how to mobilize, but also their degree of cohesion. Henceforth, in order to account for these differences in the structures of mobilization I included the Polity IV score. The inclusion of this score does not change the main results reported in the paper, nor does it achieve statistical significance. The results can be found in Model 3 from Table 2.7 from Appendix.

Appendix 2.7 Political parties status, campaign unity and lethal repression, Robustness checks, 1950-2006.

VARIABLES	Model A1 – Defections	Model A2 – Campaign Size	Model A3 – Polity IV
Single party* Conflict within campaign	-0.973 (0.936)	-1.067 (0.803)	-1.061 (0.794)
Multi-party* Conflict within campaign	-1.733** (0.884)	-1.832** (0.789)	-1.836** (0.788)
Single party regimes	3.643** (1.590)	3.597** (1.469)	3.596** (1.455)
Multi-party	3.482** (1.462)	3.456** (1.455)	3.425** (1.454)
Conflict within campaign	1.289 (0.911)	1.450* (0.779)	1.448* (0.771)
Nonviolent campaign dummy	0.722* (0.416)	0.538 (0.516)	0.555 (0.514)
External regime support	-0.696* (0.394)	-0.603 (0.401)	-0.596 (0.407)
External campaign support	-0.465 (0.401)	-0.621 (0.390)	-0.629 (0.402)
International sanctions for repression	-0.00207 (0.503)	0.00207 (0.516)	-0.00685 (0.523)
Post-Cold War dummy	1.042** (0.439)	1.150*** (0.441)	1.142** (0.453)
Concessions level	0.117 (0.125)	0.131 (0.142)	0.130 (0.143)
Population natural log t-1	0.0467 (0.126)	-0.00651 (0.129)	-0.00685 (0.128)
GDP/capita natural log t-1	0.553*** (0.179)	0.619*** (0.193)	0.613*** (0.194)
Elite defections	-0.00374 (0.00635)	0.00102 (0.00639)	0.000975 (0.00640)
Security forces defections	0.00349 (0.00632)	-0.000708 (0.00669)	-0.000661 (0.00670)
Length of the campaign	-0.0736*** (0.0280)	-0.0695** (0.0280)	-0.0688** (0.0285)
Incidence of active conflict	-1.603*** (0.341)	-1.684*** (0.374)	-1.680*** (0.378)
Campaign size	--	0.119 (0.163)	0.118 (0.164)
Polity IV t-1	--	--	0.00914 (0.0410)
Constant	-8.691***	-8.847***	-8.845***

	(2.600)	(2.613)	(2.600)
Observations	686	660	660

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

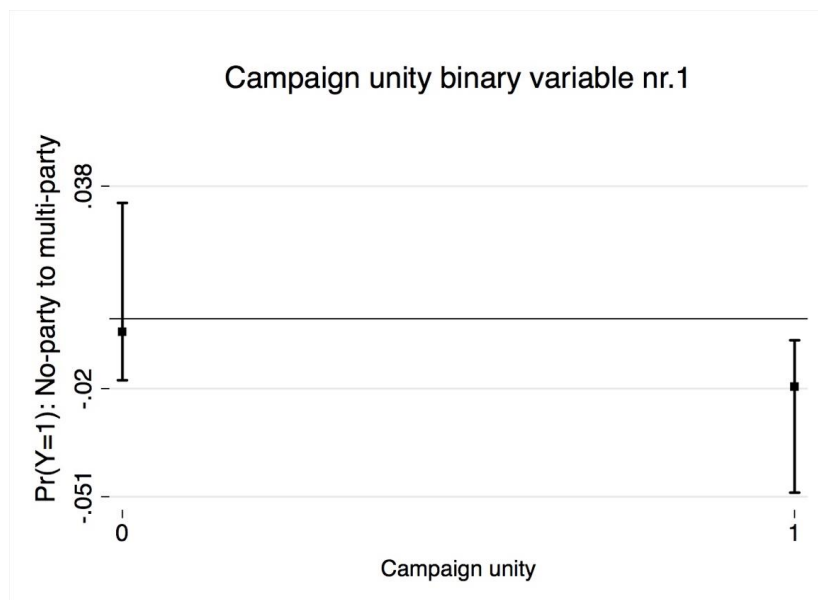
One of the assumptions when using an ordinal variable (campaign unity) is that the spaces between the different ordinal levels are equal. In other words, the change from one level to another should be equal for each level. One concern for this variable is that there might be some bias or some degree of arbitrariness in the assessment of how united the campaign is based on the accounts found in the sources used to code the data. Furthermore, when using interaction terms that contain a binary variable and some continuous or ordinal variable it is advisable to histogram the latter constituent term so that the reader can see its distribution (Brambor, Clark, and Golder 2005; Berry, Golder, and Milton 2012). In the dataset over 70% of the campaigns are either seemingly united or cooperative with moderate disunity. A harder test for the hypotheses would be to recode this variable into binary variables, and interact them with the status of political parties. Hence, I proceeded in recoding this variable in the following way: the first binary variable takes a value of 1 if the campaign was seemingly united and 0 otherwise. The second binary variable takes a value of 1 if the campaign was seemingly united or if the organization were cooperative with moderate disunity and 0 otherwise. Both these new binary variables were interacted with the variables measuring the status of political parties. The results reported in the main part of the paper remain unchanged. The tables reporting the results and the figures below show the difference in predicted probabilities in regression when the campaign unity is a binary variable for the various statuses of political parties.

**Appendix 2.8 Political parties status, campaign unity
and lethal repression, Campaign unity binary variable
nr. 1, 1950-2006.**

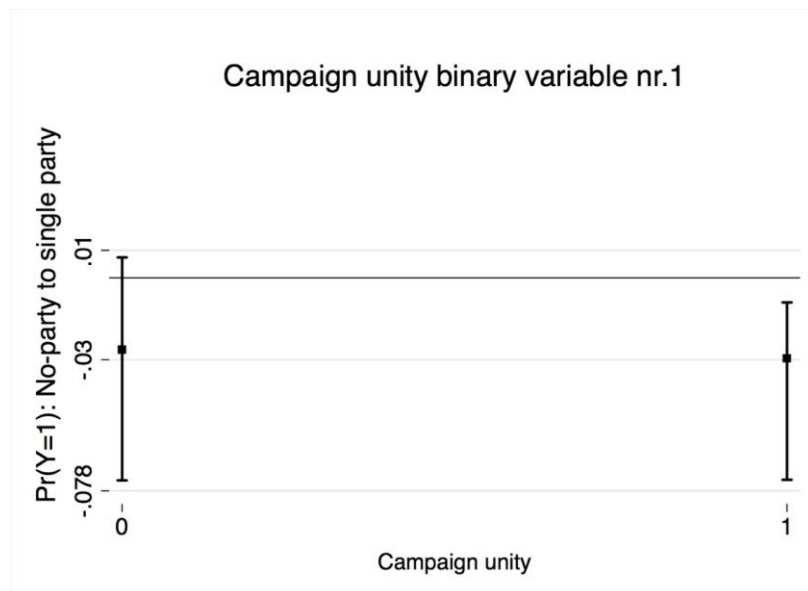
VARIABLES	Model A4 – Unity dummy no. 1
Single party* Campaign unity binary	0.257 (1.493)
Multi-party* Campaign unity binary	1.090 (1.299)
Single party regimes	1.730 (1.147)
Multi-party	0.563 (0.997)
Campaign unity	-0.239 (1.372)
Nonviolent campaign	0.580 (0.377)
External regime support	-0.777** (0.371)
External campaign support	-0.439 (0.386)
International sanctions for repression	-0.141 (0.515)
Post-Cold War dummy	0.771* (0.426)
Concessions level	0.103 (0.130)
Population natural log t-1	-0.0110 (0.132)
GDP/capita natural log t-1	0.429** (0.183)
Length of campaign	-0.0697*** (0.0225)
Incidence of civil war	-1.676*** (0.348)
Constant	-4.823** (2.411)
Observations	795

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

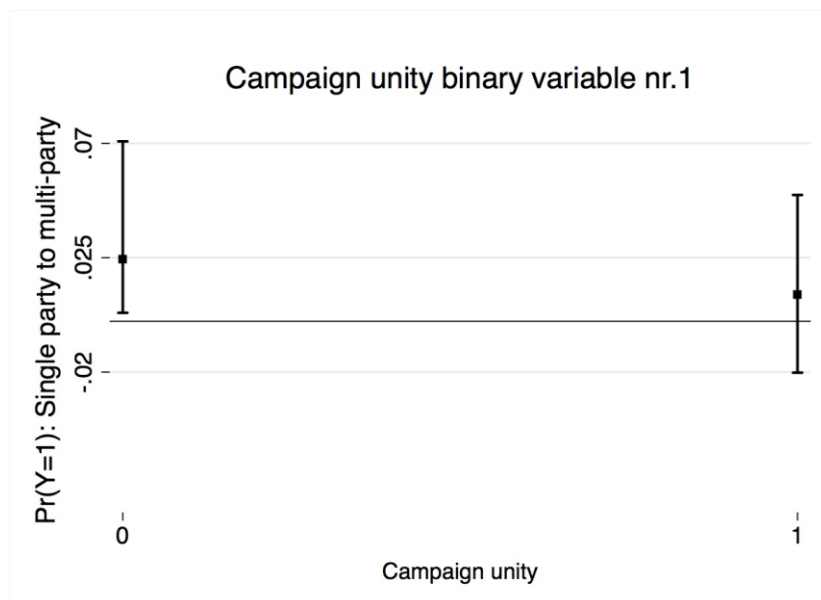
**Appendix 2.9 Difference in predicted probabilities in refraining repression
for no party and multi-party regimes**



**Appendix 2.10 Difference in predicted probabilities in refraining from
repression for no party and single party regimes**



Appendix 2.11 Difference in predicted probabilities in refraining from repression for single party and multi-party regimes



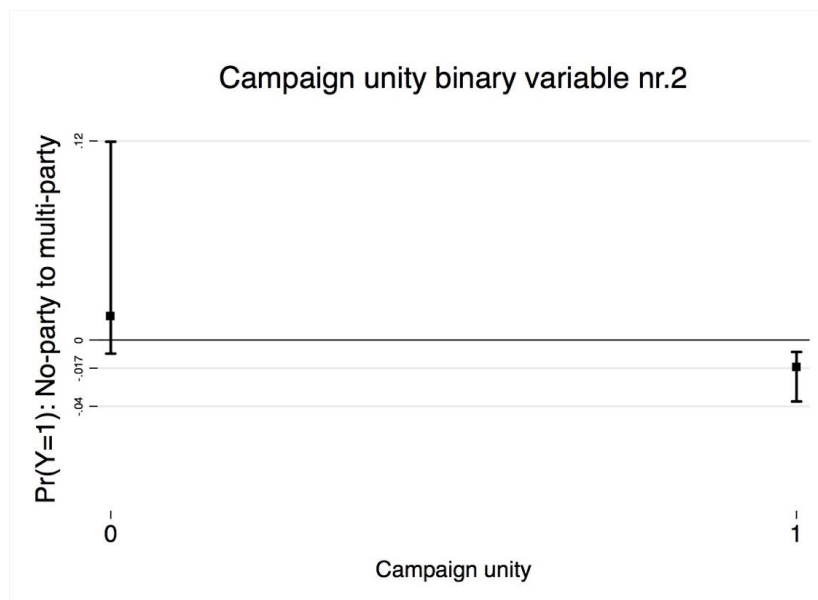
Appendix 2.12 Political parties' status, campaign unity and lethal repression,

Campaign unity binary variable nr. 2, 1950-2006.

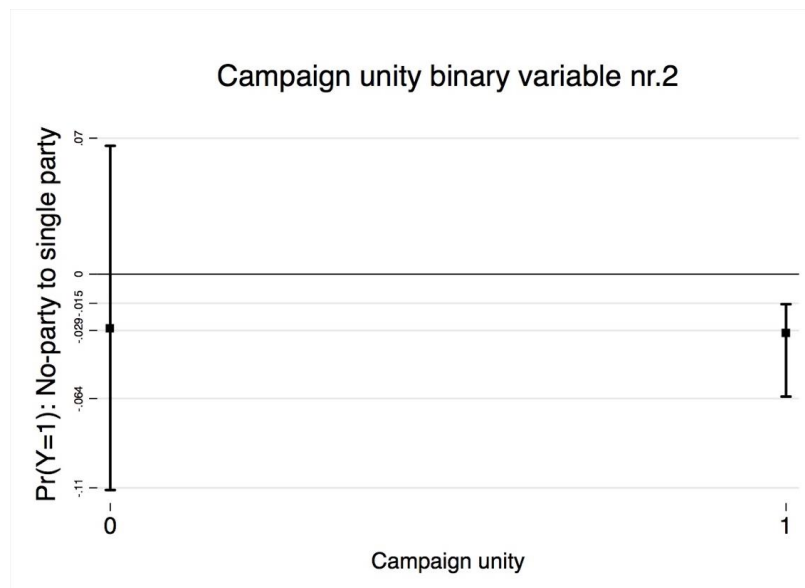
VARIABLES	Model A5 – Campaign unity binary 2 categories
Single party* Campaign unity two categories dummy	2.070 (1.374)
Multi-party* Campaign unity dummy two categories dummy	3.537*** (1.292)
Single party regimes	0.893 (1.154)
Multi-party	-1.134 (1.055)
Campaign unity two categories dummy	-2.576** (1.202)
Nonviolent campaign	0.469 (0.393)
External regime support	-0.675* (0.353)
External campaign support	-0.379 (0.391)
International sanctions for repression	0.0258 (0.509)
Post-Cold War dummy	1.025*** (0.396)
Concessions level	0.139 (0.120)
Population natural log t-1	0.0179 (0.121)
GDP/capita natural log t-1	0.462** (0.188)
Length of campaign	-0.0789*** (0.0234)
Incidence of civil war	-1.668*** (0.344)
Constant	-4.230* (2.221)
Observations	795

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

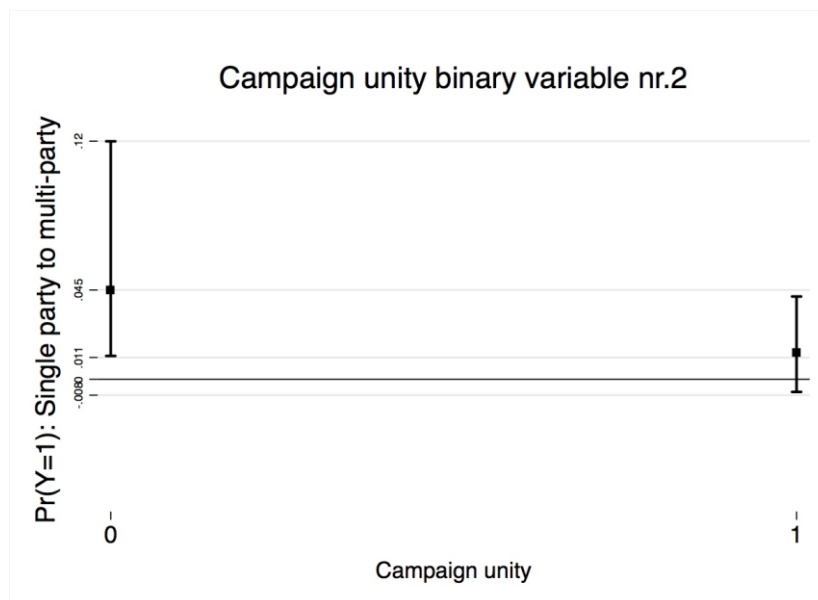
Appendix 2.13 Difference in predicted probabilities in repression for no party and multi-party regimes



Appendix 2.14 Difference in predicted probabilities in repression for no party and single party regimes



Appendix 2.15 Difference in predicted probabilities in repression for single party and multi-party regimes



3. Lie to Me: Institutionalization, preference falsification and coups in authoritarian regimes, 1950-2007

3.1 Abstract

Scholars have focused more on what regime characteristics make coups more likely to succeed in autocracies than what make coup attempts more likely in the first place. This induced a selection bias in findings as data on the 40% of coup attempts that failed was discarded. The paper argues that authoritarian institutionalization reduces the risk of coup attempt because of elites' preference falsification. This in turn, creates collective action problem which determines elites to prefer the status quo over the uncertainty of a coup. This argument is tested using a two-stage selection probit model of coup attempts and success. The results indicate that (1) institutionalization reduces the risk of coup onsets by 50%, (2) after accounting for the selection effect, an elected legislature does not, by itself, help leaders survive coups and (3) structural coup-proofing does not reduce the risk of coups in autocracies.

3.2 Introduction

In this article, I show how nominally democratic institutions of authoritarian regimes (i.e. legislature and political parties) increase an autocrat's ability to prevent coup attempts, but not survive them. On the one hand, research on coup determinants focuses on how leaders minimize the disposition and incentives of the military to attempt a coup, while disregarding civilian institutions (Roessler 2011; Pilster and Böhmelt 2011; Böhmelt and Pilster 2015; Powell and Thyne 2011; Powell 2012). On the other hand, studies that examine the effect of institutions (legislature and political parties) either solely focus on coups success (Bove and Rivera 2015), or consider coups as one among various type of irregular exit from office (e.g. coups, popular uprising and natural causes) (see Gandhi 2008; Svobik 2012). The main issue with the studies

that test the effect of civilian institutions is that by focusing only on successful coups they induce a selection bias as 40% of all coups attempts are unsuccessful (Powell and Thyne 2011).

Autocrats seem to be in a pickle considering that: (1) an autocrat who is facing a coup has less than 50% chances of surviving it (Powell and Thyne 2011; Bove and Rivera 2015); (2) investing and developing a diverse military apparatus (structural coup-proofing) does not reduce in a significant way the chances of a coup being successful once it has been attempted (Böhmelt and Pilster 2015), and (3) structural coup-proofing can lead to more instability (Powell 2014; Pilster, Böhmelt, and Tago 2016). Then, should autocrats invest in their military apparatus and trade-off one type of instability (coups) for another (civil war), or do they have other non-military strategies to deter coups? Previous studies provide some insights into how nominally democratic institutions can stabilize autocratic regimes (Gandhi 2008; Svobik 2012; Casper and Tyson 2014). First, a strong regime party or front increases the stakes of people in the survival of the regime. Lack of popular dissent reassures civilian and military elites that the leader is in control, and there is no need for a leadership change. Second, an open legislature reduces the information asymmetry between the leader and ruling elites, and, therefore, alleviates the power-sharing problem.

Building on previous research, I provide an alternative theoretical account on how institutions, despite reducing the information asymmetry between the leader and elites (Gandhi 2008; Svobik 2012), leads elites to falsify their preferences, which in turn results in coordination problems and minimizes the coup risk. I argue that although elites use the legislature as a venue to fight for policy concessions (Gandhi and Przeworski 2007), the preferences they reveal within the legislature are not their real preference over leadership. Hence, institutionalization reduces the risk of coups by heightening the coordination problem between elites because participation in regime sanctioned institutions obscures the preferences of those involved. In

other words, elites' coordination of actions necessary to attempt a coup is hampered because it is hard for dissenting elites to distinguish between opportunistic and loyal supporters of the leader. Since the consequences of a failed coup are high, elites prefer the status quo over the uncertainty of coup attempt. Finally, the formal rules of interaction within institutions offer elites safer mechanisms for challenging the leadership that can still preserve their position in case they fail¹⁰.

The coup minimizing effect of institutionalization is tested in a time-series cross-sectional research design recording all coup incidences between 1950 and 2007. A two-stage selection model for coup attempt and outcome convincingly supports the claim that institutionalization reduces the risk of coup attempt. Moreover, once we account for the effect of institutions in the first stage (i.e. coup attempt), having an elected legislature has no effect in the second stage (i.e. coup success). More simply, it shows the negative effect of institutionalization on coup success reported in previous studies is primarily driven by its effect on preventing coup attempts. This finding makes sense considering that legislatures and political parties are more a forum for political negotiations and compromise rather than specialized units that can tilt the scales in an armed struggle. Furthermore, the empirical results indicate that purges increase the likelihood of coup attempts, while they reduce the likelihood of their success, which further contradicts previous findings in the literature (Bove and Rivera 2015).

¹⁰ The paper also tests the effect of institutions on coup outcomes, but it does not elaborate theoretically on this. The reason behind this is two-fold. First, the link between institutions and coup success has already been established in the literature (Svolik 2012; Bove and Rivera 2015). Second, the scope of the paper is not to provide a theoretical account for why this effect might be different, but to show empirically that the negative effect of institutions on coup outcome is primarily driven by their effect on coup attempts.

3.3 Coup d'état determinants

The empirical literature on coups has focused on the role of civil-military relations and the strategies used by leaders to prevent the military from seizing power (Pilster and Böhmelt 2011; Böhmelt and Pilster 2015; Powell 2012; Powell 2014; Roessler 2011). Powell (2012) finds that militaries that are given larger financial endowments lack the disposition and incentives to attempt a coup. Further, he finds that increasing the relative strength of a paramilitary versus the regular armed forces creates coordination obstacles to these organizations. Similarly, Pilster and Böhmelt (2011) develop a measurement for the structural coup-proofing of a regime, and operationalize it via the effective number of military organizations in a country. They argue that this counter-balancing of military organizations not only creates a rivalry between them, but it also offers the leader a force capable of defending his rule in case of challenges. Also, Pilster and Böhmelt (2012) find that authoritarian regimes engage more in coup-proofing because leaders of these regimes are more susceptible to being overthrown by the military. In subsequent research, they find that structural coup-proofing lowers the likelihood of coup onsets to a tipping point of about two equally strong military organizations after which the risk of coup increases again (Böhmelt and Pilster 2015).

However, structural coup proofing comes with several drawbacks. Firstly, the endowments of resources to paramilitary forces can lead to lower effectiveness in interstate disputes (Pilster and Böhmelt 2011). Moreover, Powell (2014) argues that coup-proofing can increase the likelihood of rebellion while decreasing the likelihood of coups. Roessler (2011) treats civil war and coup d'états as substitutes, and argues that elites in authoritarian regimes choose to purge and exclude regime insiders along ethnic lines to neutralize the threat of coup d'état. While these empirical studies on coup determinants explain the reasons for fractionalizing the military and its purpose in protecting political leaders from coups, they fail

to discuss what other alternatives leaders can use in order to keep the military in check or minimize the risk of coups. Given that investing in the paramilitary forces has drawbacks such as heightened risk of rebellion or the onset of genocidal violence (Powell 2014; Pilster, Böhmelt, and Tago 2016), can authoritarian leaders choose other strategies that would protect them from coups while minimizing the risks of other types of challenges or instability?

Several scholars looked into how regime characteristics affect the risk of coup attempt and success (Luttwak 1968; Belkin and Schofer 2003; Powell 2012; Svobik 2012; Bove and Rivera 2015). For instance, Zimmermann (1983) distinguishes between “push” and “pull” factors. The former motivates military officers to launch a coup while the latter refers to the conditions that enable them. Similarly, Belkin and Schofer (2003) understand coups risk as a reflection of structural factors (type of government, political culture, and state-society relations) that make coups possible. More recently, Svobik (2012) models the independent effect of parties and legislatures on irregular exits from office of authoritarian leaders (popular uprisings, coups, and natural causes). He finds that having a legislature or a political party reduces the hazard of exit from office via a coup. However, his study lacks in providing any indication whether and how these institutions can help leaders prevent coups, not only survive them. Frantz and Stein (2017) find that that formal and informal succession rules in autocracies prevent coups, but they do not theoretically consider how existence of formal institutions affect elites’ incentives for grabbing power by force. Bove and Rivera (2015) explore how strategies of co-optation and repression within the ruling elite affect coup onsets and find that an elected legislature suppresses the coup risk by reducing the information asymmetry between the leader and other elites. However, their findings display a shortcoming as they used the Archigos data to capture coup attempts (Goemans, Gleditsch, and Chiozza 2009). By using Archigos, they capture only coups that were successful in ousting the leader from office, hence excluding unsuccessful

coups from their sample. Powell and Thyne's (2011) data on coups records 285 coup attempts in authoritarian regimes, out of which 173 were successful between 1950 and 2008. Comparatively, Bove and Rivera (2015) data captures only 165 coup attempts which equate to successful coups due to the coding criteria used by the Archigos data (Goemans, Gleditsch, and Chiozza 2009). Although they elaborate theoretically how an elected legislature prevents coup attempts, empirically they capture the effect of elected legislatures on coup outcome.

The implication of the regime characteristics arguments is that a powerful military is not enough to explain instances of military seizure of power, but rather these characteristics help us understand the conditions under which the military has incentives to use its tools to seize power (Luttwak 1968; Zimmermann 1983; Belkin and Schofer 2003). However, these studies take the enabling role of institutions for granted and treat it as a statistical nuisance rather than test for it (Pilster and Böhmelt 2011; Böhmelt and Pilster 2015; Pilster and Böhmelt 2012; Powell 2012; Powell 2014). Conversely, the studies that do seek to test the effect of institutions on coup attempt and success, capture only (intentionally or not) their effect on coup success. This leads us to a situation where we have a really good theoretical account of how institutions help authoritarian leaders survive in office (Svolik 2012), and robust and consistent findings regarding the use of elite co-optation as an autocratic survival mechanism (Bove and Rivera 2015). Yet, we still lack a proper understanding on whether these institutions can also prevent coups in authoritarian regimes.

3.4 Institutions and authoritarian governance

From the previous discussion follows that authoritarian leaders require specific tools to survive in office, increase the spoils associated with keeping office and minimize the conflict between political actors (Bueno de Mesquita et al. 2003). More specifically, any authoritarian leader needs to minimize the struggle between elites and the masses excluded from power, and

to reduce the conflict potential between elites. Political parties serve the former purpose, while legislatures serve the latter¹¹ (see Svolik 2008). A single party regime or a united front in a dictatorship is created and maintained to co-opt the most threatening and opportunistic among the masses, to split the moderates from the radicals, increase and improve the flow of social and material benefits, gather information about potential dissent, and mobilize the masses for elections (Lust-Okar 2005; Reuter and Gandhi 2011; Brownlee 2007; Wright and Escribà-Folch 2012; Svolik 2012). Authoritarian regimes use political parties to elicit support from larger groups from within the society, while using them as instruments of shaping and controlling the social and political life of groups within the country. Ideally, the leader seeks to co-opt the masses via a regime sanctioned party or front so that the dictator has more control over the population. If the leader is not strong enough to co-opt groups via the party, to quell their activity, or if it needs their cooperation, then the dictator will be forced to offer these groups some political concessions. These come in the form of allowing multiple political parties to exist outside the influence of the regime and permitting them to take seats in the legislature via appointments or elections.

Authoritarian leaders use legislatures to share power with elites who help them survive in office. Legislatures have the role of incorporating elites that have the potential and resources to mobilize opposition against the regime. Similarly, elites can gain access to the legislature if they are essential for the economic prosperity of the regime. For instance, the ruling family of Kuwait offered political concessions in form of institutions to the merchant opposition, but rescinded them with the discovery of oil (Gandhi 2008). Furthermore, legislatures institute

¹¹ The literature on authoritarian politics offers a variety of understandings regarding the role of institutions and how they solve the conflict between elites and citizens (see Pepinsky 2014). For this article, I adopt Svolik's (2012) conceptual framework regarding the role of legislatures and political parties as this provides a unified framework and conceptual heuristic that allows us to compare and analyse across regimes the enormous variation institutions, policies and outcomes

formal rules of interaction between elites which act as a check on authoritarian leaders' renegeing on their promises, allowing policy compromises between the regime and the opposition, improve monitoring and detection of non-compliance between authoritarian elites, and provide a controlled bargaining space (Gandhi 2008; Svobik 2012; Wright and Escobar-Folch 2012). Simply put, legislatures are the institutions that reduce the information asymmetry between the leader and authoritarian elites by reducing misperceptions about each other's intentions and actions. In turn, this prevents misperceptions turning into active conflict that would destabilize the regime.

Given that coups are an elite driven process, why should we consider individually legislatures and political parties when looking at the effect of institutionalization on coup attempts? Clearly, political parties and legislatures serve different purposes in authoritarian regimes, but their role is complementary in helping the incumbent survive in office. Should the military observe erosion of the regime public support, they can legitimize a coup attempt for the restoration of public order. Then, the control of the masses can be an important determinant of whether elites decide to attempt a coup (Casper and Tyson 2014). Parties are an institutional tool to obtain support from and control the masses, but whether or not they are kept under control should not influence much whether elites are successful in staging a coup. A necessary condition for elites to enjoy the perks of being in office is directly connected to whether they can ensure the stability of the regime by controlling the masses and thwarting any challenges through collective action. Hence, it is important to account for the impact of political parties' regulation alongside the status of legislature given that previous studies showed the stabilizing effect of a single party (Geddes 1999; Ulfelder 2005; Svobik 2012). Then, allowing the masses to have some political representation through a regime party alleviates some of the problems concerning regime survival. However, this is a necessary, but not sufficient condition for elites

to enjoy the perks associated with being part of the ruling elite. The second necessary condition for elites to obtain high levels of benefits requires the leader does not amass all the power and keep most, if not all, perks associated with office. The legislature serves the purpose of ensuring a more balanced power-sharing and benefits distribution between the leader and elites. Thus, in order to understand how institutionalization affects coup prevention, we need to account individually for the status of legislature and political parties.

3.5 Institutionalization, preference falsification and collective action

The suppressing effect of institutionalization on coup attempts is based on how these affect the preference of elites sharing power. As previously mentioned, coups are an elite driven process that aim to unseat the leader through unconstitutional means. The literature on leader survival argues that a leader is able to survive in office with the help of a winning coalition (Bueno de Mesquita et al. 2003) or ruling coalition (Svolik 2012)¹². These represent the number of actors whose resources and support offer the leader the power to control groups in the society and survive in office¹³. The members of the ruling coalition obtain private benefits from sharing power with the leader. However, the leader's ideal point of governance would be when she shares power and the spoils of office with as few as possible elites.

The institutionalization level of the regime is representative of the number of actors whose support the leader needs to survive in office. More specifically, the transactions costs of monitoring the actions and punishing non-compliance between ruling elites increases with the number of actors required to hold power. If a dictator has a large ruling coalition, then she can benefit from institutions by creating formal and institutionalized rules of interaction to decrease

¹² The two are used interchangeably since from a theoretical point of view both capture the essential group on which the regime rests for maintaining power.

¹³ Similar to Svolik (2012), power could represent anything from economic, military or social resources on which the regime rests its pillars of support.

the transactions costs of monitoring the actions of elites and reducing the information asymmetry within the ruling coalition. Conversely, any actor or group that cannot be co-opted through institutions or is not essential for the survival of the regime, will be marginalized and/or eliminated through repression (Frantz and Kendall-Taylor 2014). Svolik (2012) argues that dictators use politburos, advisory councils, and legislative committees to exercise their power which are usually embedded within authoritarian legislatures and parties.

Institutionalization prevents coup attempts in authoritarian regimes through two related mechanisms. The first mechanism refers to how institutionalization creates a vested interest for elites in the regime. By supporting the leader, elites have access to benefits which forces them to falsify their preferences. Second, elites are unable to distinguish between loyal and opportunistic supporters which imposes collective action problems should they want to challenge the leader. Then, given the high costs of a failed coup attempt and collective action problems, elites prefer to use institutional avenue to challenge the leader and keep its power in check.

In the context of authoritarian regimes, preference falsification represents the act of authoritarian elites and political actors misrepresenting their preference under perceived social pressures (Kuran 1997). This means that actors that were co-opted through institutions perceive that other elites support the dictator. Hence, they act as if they prefer the status quo rather than oppose it. They do it knowing that there is no independent authority to enforce rules and violence is the alternative to supporting the leader (Svolik 2012). Furthermore, authoritarian leaders obtain the support of ruling coalition members by endowing them with private material and social benefits that are not otherwise available to outsiders. For example, access to housing, education, job promotions or social benefits during the communist regime of Poland was restricted to members of the Communist party. Similarly, during the Soviet regime the so-called

nomenklatura (or the ruling elite) had “*a life peerage associated with honors, with a high standard of living and a good assortment of privileges...The number of people that received these perks kept up with the growth in sheer number of the apparat*” (Arbatov 1993:225-228).

Authoritarian elites receive huge pay-offs from supporting the leader and have access to benefits otherwise inaccessible to outsiders. Hence, they have a vested interest in the continuation of the status quo and avoid engaging in actions that could jeopardize this arrangement. Also, elites that support the leader of a non-institutionalized regime receive private benefits and would like to maintain the status quo. However, the main difference between an institutionalized and a non-institutionalized regime is how they mediate the interaction between elites and the leader. In the former, it is based on formal rules, while in the latter, the rules are informal and subject to the leader’s whim (Svolik 2012). For example, (Boix and Svolik 2013) argue that political parties and legislatures represent a higher level of institutionalization that is harder to manipulate and circumvent compared to more local level institutions (e.g. Basic People’s Congresses in Libya). In order to manipulate these institutions, the leader needs to devote resources in producing repressive legislation, publicize it, enforces its enactment, and punish offenders (Wintrobe 2000). These formal rules induce both predictability and credibility in the interaction and the status quo between the leader and elites. This in turn leads to elites being more secure of their position and provides access to benefits as long as they remain loyal to the leader (Bueno de Mesquita et al. 2003).

A tension in the theoretical account above is that legislatures have been theorized to represent a controlled bargaining space in which the opposition can voice demands and negotiate policies with the ruler (Gandhi and Przeworski 2007; Gandhi 2008). Then, if legislatures are a venue in which elites negotiate policies, and implicitly reveal preferences, how come do we have preference falsification of behalf of elites? I argue that elites, although

they negotiate over policies and reveal some preferences about these policies, they do so under constraints put by the leader and they know that any real opposition would get them purged, and eventually killed. Then, elites express policy preferences in the legislature, but the demands they voice in the legislature are short of leader removal since they know the alternative. Then, the legislature is a venue in which demands are being voiced, rather than a venue in which true opposition is taking place. For example, Hastings Banda of Malawi used the legislature to pit potential rivals, once crucial supporters of Banda, against each other to obtain the dictator's blandishment. Forty out of the 150 members expelled from the Malawian legislature between 1964 and 1981 ended up in prison (Wright and Escriba-Folch 2012). Then, given the alternative, elites prefer to reveal only the preferences that would obtain them the benevolence of the dictator.

Probably the most illustrative example of preference falsification can be found during the fall of the communist regime in Poland in 1989. After the Solidarity movement was formed in 1980 and voiced demands for increased social and political rights, in 1981, the leader of communist Poland, General Wojciech Jaruzelski, declared the martial law and increased repression to disband the movement. However, the economic problems that plagued Poland for years lead to waves of nation-wide protests, in danger of turning violent in the mid-1988. To prevent national unrest, the Communist party agreed to hold talks with the representatives of Solidarity which ended in an agreement for nationwide legislative elections in June 1989. The agreement stipulated that the 100 seats in the Senate would be freely contested, but 65% of the seats in the lower house would be reserved for the Communist party and their allies. This would guarantee them ability to impose the prime-minister. The Communist party was not concerned that the Solidarity movement was organized well enough to challenge its hold on power. Furthermore, the Communist regime's Center for Public Opinion and Research (CBOS)

indicated through its opinion polls that the Communist party enjoyed more support than Solidarity, and its figure was as popular as the pope and far more popular than Lech Walesa, the leader of Solidarity. In the elections, the Solidarity movement won 99 of the 100 seats in the Senate and all the 35% of the seats in lower chamber it had reserved. The remaining 65% of the seats reserved for the Communists and their allies was divided: 37.6% for the Communist party and 26.9% for its allies which were considered puppet parties without any claim to power. However, when forming the government, two formally loyal parties to the Communists joined the Solidarity which gave them the majority to form the first non-Communist government in Eastern Europe in forty years (Clark, Golder, and Golder 2017). Fear of the repercussions was considered to be the main reason why survey responders and Communist allies falsified their true preference about the leadership and the Solidarity movement managed to form the first democratic government (Kamiński 1999: 97).

Attempting a coup (and failing) is an extremely costly endeavor for plotting elites. If a coup fails, its plotters could potentially be imprisoned, exiled or executed (Powell 2012). Alternatively, their supporting groups could suffer sanctions such as abolition of the military (Haiti), purging of officer corps (Kenya), or massacre of the plotters' ethnic group (Liberia) (Powell 2012). Furthermore, about 20% of all coup attempts resulted in civil conflicts between the warring parties, with some of them surpassing 1000 deaths (Powell and Thyne 2011). Then, the high risks associated with a failed coup and the strategic uncertainty regarding its outcome reduces the willingness of elites to attempt a coup. In a similar vein, Svolik (2012) contends that elites' fear of joining the losing side outweighs any preference over who prevails in the ensuing battle (see also Geddes 1999). This means that elites are more concerned about supporting the winning side and maintain the benefits accruing from being part of the ruling

coalition rather than pick a (possibly) losing side and suffer the consequences of a failed coup attempt.

Preference falsification results in elites not expressing their private preference over the leadership as they are afraid that it does not align with the preferences of other elites. Then, elites have difficulties distinguishing opportunistic from loyal supporters of the regime. Because the legislature is a forum of interaction between elites and the leader, then it would be the venue to express their opposition to the leader. Elites would do it in the hope that their true preference would align with the one of other elites, thus counter-balancing the power of the leader. However, strong outward expressions of opposition are observed by the leader who could purge opposing elites before they have any chance of organizing a challenge. This leads to a situation in which elites have an approximate, but not common, understanding of their aggregate preference over leadership, and by extension their joint strength, so that they can successfully challenge the dictator. Because it is difficult for elites to accurately assess their joint preference and strength over the leadership, they are in a deadlock in which they do not know who would support a coup to unseat the leader.

Furthermore, institutionalized regimes have formal rules of interaction between elites, and also impose limits on the term of the leader (e.g. six-year term limit presidency in Mexico during PRI or the two mandates limit imposed on the Secretary General of the Communist Party of China). This prevents leaders from acquiring and holding power for too long while providing institutional avenues for elites to challenge the leadership. Comparatively, non-institutionalized regimes are formed of a small clique of elites in which the rules of interaction are informal and violence is the ultimate arbiter of their interaction (Svolik 2012). Then, in non-institutionalized regimes, if elites manage to coalesce in challenging the leader, they only have the option of a coup to force the leader out of office. Conversely, in an institutionalized regime, elites can use

the less risky formal procedures of the institutions to attempt the removal of the leader. A good example of such a case is the anti-Party plot from 1957 against Nikita Khrushchev. The Presidium, at the time the highest ranking body of the USSR, tried to remove Khrushchev as First Secretary of the Communist Party through a majority vote. Despite the seven-to-four majority, Khrushchev refused to resign and asked for the result to be validated by the Central Committee who opposed the vote of the Presidium. However, Khrushchev lost power in 1964 at the hands of the same Central Committee that saved him in 1957. This example shows that instead of attempting a coup that could have had dangerous repercussions and plunge the regime into chaos, elites from institutionalized regime can use the formal rules embedded into institutions to attempt ousting the leader, while still preserving their position in power.

In conclusion, institutions protect leaders of authoritarian regimes from coups by creating a vested interest for elites to maintain their position and access to private benefits. This leads elites to falsify their preference regarding the leadership and prevents them from acting on plotting a coup since they do not have common knowledge of their preferences. This in turn leads to elites being unable to organize themselves should they want to remove the incumbent through a coup. Furthermore, institutionalized regimes offer dissenting elites safer, more formal mechanisms to attempt the removal of the leader from office. The first hypothesis follows from this theoretical argument. The second hypothesis is based on arguments from previous literature that argues that having an elected legislature reduces the likelihood of a successful coup (Svolik 2012; Bove and Rivera 2015).

H1: Coup attempts are less likely as authoritarian regimes become more institutionalized.

H2: Successful coups are less likely in authoritarian regimes with an elected legislature.

3.6 Civil-military relations and coups

The involvement of the military is undoubtedly key in a coup attempt (Belkin and Schofer 2003; Powell 2012). The rationalist perspective on military seizure of state power rests on the assumption that such a challenge happens when the payoffs associated with overthrowing the government exceed the benefits stemming from the status quo (Böhmelt and Pilster 2015). Then, the military should intervene in politics whether it feels that the status quo does not advantage its organization interests or when it can justify its action as the result of eroded popular support (Belkin and Schofer 2003; Powell 2012). Moreover, the military is not interested in maximizing its position in power, but rather they are interested in maximizing their corporate interests (increased budgets, organizational unity, civilian non-interference and special immunity) (Nordlinger 1977; Geddes 1999). It follows that the military's ability and disposition to seize power can be exacerbated or mitigated by civilian factors.

Clearly, the military is paramount in the execution coups as it has the material resources and skills that can force the leader's exit from office and reinforce the irregular leadership power transfer. However, the military requires the support of civilian political elites and groups in order to successfully attempt a coup and govern the country should it decide to do so (see Needler 1968; O'Donnell 1973). For example, between 1946 and 2008 there were a total of 203 leader irregular entries via coups, and the military was involved in 184 of them. However, for the same period, in regimes in which the leader entered via a coup, the military remained directly involvement in politics in only 54% of all leader-years¹⁴. For example, the Guatemalan military in 1984 managed the election of a Constituent assembly that wrote the new constitutions under which elections were held (Wright and Escriba-Folch 2012). Similarly, the

¹⁴ Figures calculated using data from Svolik (2012).

2005 coup from Mauritania led to elections in which the coup plotters banned members of the military from running in the elections. Also, in Colombia (1958), Chile (1998), Uruguay (1984) or Venezuela (1958), the military stroke deals with political parties that were expected to win the elections, paving the way to transitions to democracy (Karl 1990).

If the military decides to hold on to power following a coup, it will require civilian institutions to solve the conflict between societal groups and elites in power. In other words, the military requires tools of governance that go beyond their specific organizational purpose of ensuring the security of the state¹⁵. For example, Rodriguez Lara of Ecuador, upon seizing power via coup in 1972, had closed the legislature and banned all political parties which shunned the institutional routes of interests' representation of the industrialists and the workers, the two most powerful groups of the Ecuadorian society. The failure of the envisioned reforms and the lack of institutional mechanisms to deal with the grievances of these groups led to increased protests. Furthermore, this state of instability led to a first coup attempt in 1975, and ultimately the ousting of Rodriguez Lara via another coup in 1976 (Gandhi 2008). In a similar fashion, the Thai military closed the legislature in 1971 as to not endanger their corporate interests. This move backfired against them as nearly half a million people took the streets in Bangkok which lead to over 1000 deaths by the fall of the military regime in 1973. Moreover, in light of this unrest, the king put together a constitutional assembly under which the first legislature without any political parties backed by the military was elected (Zimmerman 1974).

¹⁵ Accounting for the effect of institutions, despite the military's involvement in politics, ensures conceptual consistency and rigor that allows us to compare across authoritarian regimes rather than assume the regime's tools of governance based on heterogeneous characteristics (status of civilian institutions vs military involvement in politics).

3.7 Methodology

The coup suppressing effect of institutionalization is tested in a time-series cross-sectional research analysis of 114 authoritarian regimes. The unit of analysis is country-year with a timespan between 1950 and 2007. The population of authoritarian regimes is identified using Geddes, Wright and Frantz (2014) dataset on authoritarian regimes.

3.7.1 Outcome variable

The paper main objective is to test the effect of institutionalization on coup attempts and outcomes. However, previous research has already tried to test the effect of an elected legislature on coup attempts, but used a dataset that undercounts the number of coups in the population of authoritarian regimes (Bove and Rivera 2015). They use the Archigos data (Goemans et al. 2009) to capture coup attempts, but what they are actually capturing are successful coups. This happens because Archigos records instances of how and when leaders were removed from office. To account for this shortcoming and a possible selection effect, I update the dataset from Bove and Rivera (2015) by culling data about coup attempt events from Powell and Thyne (2011). They define coup attempts as *“illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive...there is no minimal death threshold for defining a coup.”* (Powell and Thyne 2011: 252). Then, I derive two dummy dependent variable which capture coup attempts and coup success. The first variable takes a value of 1 if a coup was attempted, and 0 otherwise; the second variable takes a value of 1 if the coup was successful in removing the leader from office, and 0 otherwise.

3.7.2 Explanatory variables

The variables used to operationalize institutionalization are culled from Cheibub, Gandhi, and Vreeland (2010) data on political institutions. Authoritarian leaders use legislatures to interact and reduce the conflict potential between elites, and political parties to

control and co-opt the population of the country. The primary focus of the paper, as a measure of institutionalization, is on the legislature as these are the institutions that regulate the interaction between authoritarian elites and play a more prominent role in reducing the coup risk in an authoritarian regime. The first variable capturing institutionalization variable takes a value of 1 if a regime has an elected legislature, and 0 otherwise¹⁶. The second variable takes a value of 0 if the legislature is closed, 1 if it is open, but appointed by the leader, and 2 if the legislature is elected. The choice of this variable as a measure of higher levels of institutionalization allows us to observe more nuanced variation in the effects and it's used as an approximation of the leader's power. The intuition behind this is that an elected legislature shows the incumbent is not strong enough to appoint members of the legislature and needs to provide some political concessions to the opposition to survive in office (e.g. elections and open legislature) (Gandhi 2008).

The secondary measure of institutionalization is the status of political parties. These solve the problem of authoritarian control of the population, but they cannot assuage the demands of powerful elites, or determine elites to put down their weapons if a challenge against the incumbent arises. For these reasons, the status of political parties matters when looking at the effect of institutions on coup attempts, but it does not matter for its outcome once a coup has been attempted. The variable takes a value of 0 if all political parties are banned, 1 if there a single regime party or united regime front, and 2 if multiple parties are allowed to exist outside the regime front. The status of political parties is the key identification criteria to estimate the Heckman selection probit. As previously discussed, political parties are used by authoritarian regimes as a tool for co-optation of the masses (Gandhi 2008; Svobik 2012) and to create

¹⁶ This variable is used to replicate the model of Bove and Rivera (2015) in the coup success equation of the selection model.

patronage networks between citizens and elites (Brownlee 2007). Coups are attempted should elites consider that a change in the status quo would benefit them. Political parties, as a mean of controlling the population, play a key role in authoritarian survival as they reduce incentives for mobilization against the regime (Svolik 2012); hence, elites do not receive any signal as to the opportunity to attempt a change in government (Casper and Tyson 2014). Political parties are not maintained by autocracies with the purpose of fighting off an armed challenge to the leader (see Böhmelt and Pilster 2015), but rather to prevent mobilization against the regime and to offer avenues for co-optation of the masses (Gandhi 2008; Svolik 2012). For these reasons, the status of political parties serves as the main identification strategy for the estimation of the Heckman selection probit¹⁷.

3.7.3 Control variables

These variables are selected based on previous research and are included to account for potentially confounding factors regarding the effect of institutionalization on coup attempts and outcomes (Powell 2012; Böhmelt and Pilster 2015; Bove and Rivera 2015). Descriptive statistics of all the variables can be found in Table 1.

Economic factors (GDP/capita, and GDP year-to-year change) have been associated with regime legitimacy and motives for the army to organize and execute coups (Belkin and Schofer 2003). The underlying mechanisms of accounting for economic factors comes from the fact that positive economic conditions induce regime legitimacy, which in turn makes demands for regime change more likely. Furthermore, economic conditions have been found to affect institutionalization levels of authoritarian regimes (Boix and Svolik 2013). GDP/per capita is

¹⁷ Model A10 from Table 3.5 in the Appendix shows that when including the status of political parties as a covariate in Bove and Rivera's model of coup success and elected legislature, it does not exert a statistically significant effect on the likelihood of coup success.

measured in real 1996 dollars while the GDP year-to-year change represents the percentage change in GDP/capita in subsequent years (Gleditsch 2002).

Regime legitimacy is affected not only by economic factors, but it is also influenced by political factors. It is best captured by overt signs of public discontent with the regime, which helps elites legitimize their coups (Casper and Tyson 2014). The instability measure is culled from Banks and Wilson (2017) and is a sum of anti-government protests, riots, and strikes. Furthermore, Bove and Rivera (2015) find that purges increase the likelihood of coups being successful. Hence, I include a variable counting the number of purges (Banks and Wilson 2017). Finally, variables measuring the number of previous coup attempts and previous successful coups are included to account for the so-called “coup-trap” (Londregan and Poole 1990).

Next, the variables that pertain to the composition and strength of the military are included to account for the military disposition and ability to carry out a coup. A country’s expenditure per soldier, year-to-year change in it, and the composition of the armed forces in raw numbers are included to account for the motives of the army to organize and execute a coup (Singer, Bremer, and Stuckey 1972; Powell 2012). These factors could be confounding for institutionalization as leader might develop a strong army or paramilitary forces to keep in check the political aspiration of various opposition groups through repression.

Finally, temporal dependency is accounted for in the models by including a set of cubic splines as indicated by Beck, Katz, and Tucker (1998), while reporting robust standard error clustered by country to correct for bias due to nonconstant variances.

3.7.4 Model specification

Given that the paper builds on previous research to test the effect of institutionalization on coup attempts and their success, it uses a Heckman selection probit model because factors that lead to coups attempts could also influence their outcome (Van de Ven and Van Praag

1981; Powell 2012). Furthermore, ignoring one of the two stages can potentially bias the results by either over or under-estimating the results (Böhmelt and Pilster 2015). The identification of the Heckman selection model is ensured by including the status of political parties in the coup attempt equation, but not in the coup success equation. Finally, a probit model is estimated to show that the coup suppressing effect of institutionalization is not due to the selection effect, or some quirks of the estimation for the Heckman probit model.

Table 3.1 Descriptive statistics of the main variables

VARIABLES	(1) N	(2) Mean	(3) Std. dev.	(4) Min	(5) Max
Coup attempt	4,152	0.0706	0.256	0	1
Successful coup	3,958	0.0412	0.199	0	1
Ln GDP pc	4,152	7.775	1.013	5.298	13.36
Growth GDP pc	4,111	0.0357	0.126	-1.292	3.176
Purges	4,012	0.216	0.884	0	34
Dissent	4,011	0.323	0.649	0	3.912
Military expenditure per soldier	3,906	9.117	1.125	1.083	14.90
Military personnel	4,133	3.793	1.694	0	8.666
Growth military expenditures	3,646	0.0547	1.229	-8.561	9.427
Elected legislature	4,152	0.720	0.449	0	1
Legislature status	4,152	1.501	0.830	0	2
Political parties status	4,152	1.338	0.715	0	2
Number of previous successful coups	4,152	0.735	1.142	0	9
Number of previous coup attempts	4,152	1.441	2.026	0	15

Count of years since last coup attempt and last successful coup, its squared and cubic polynomials omitted from the presentation.

3.8 Empirical analysis

The findings of the previous literature regarding the negative effect of elected legislatures on successful coups could be driven by a selection effect of institutions (Svolik 2012; Bove and Rivera 2015). In other words, it could be the case that, in the first instance, an elected legislature reduces the risk of a coup attempt rather than its success, hence making the

observed relationship spurious¹⁸. Ignoring this selection effect could potentially bias our estimates and lead to incorrect inferences about the effect of institutions on coup success (Van de Ven and Van Praag 1981; Böhmelt and Pilster 2015). To account for this potential problem, I estimate a Heckman probit selection model in which I account for the fact that factors leading to coups could also influence their outcome.

Table 3.2 summarizes the results of the Heckman probit selection model (Van de Ven and Van Praag 1981). The model consists of two equations that estimate the effect of institutions on coup attempts and success with splines included to account for time dependency as indicated by Beck, Katz and Tucker (1998)¹⁹. Furthermore, as previously discussed in the methodology section, the identification criteria of the Heckman probit selection model is ensured by the inclusion of the status of political parties in the attempt equation, but not in the success one. The test of independence of the two equation shows that we can reject the null hypothesis of no correlation of the errors between the two equations ($Prob > \chi^2 = 0.0404$). This indicate that this model fits the data better than simple probit models estimating independently the effect of institutionalization on coup attempts and success²⁰. Furthermore, the results show that when accounting for the selection effect of institutions on coups, having an elected legislature does not exert a statistically significant effect on the likelihood that coups are

¹⁸ A replication and discussion of the Bove and Rivera (2016) model can be found in the online appendix.

¹⁹ In the coup success equation, institutionalization is captured by the elected legislature dummy variable and it resembles the model from Bove and Rivera (2015). In the coup attempt equation, institutionalization is captured by an unordered categorical variable for the status of legislature (closed is the baseline) and political parties (political parties banned as baseline). The discussion for this decision can be found in the research design section and in footnote 6.

²⁰ The negative coefficient of rho indicates that, generally, components of the error term that make coups more (less) likely to occur, they also make coups less (more) likely to succeed. Among the observed factors, the "Purges" variable has such an effect, as its coefficient is positive and statistically significant in the attempt equation, but negative and significant in the success equation. Of course, the factors whose effect is captured by the error terms are typically unobserved, or otherwise hard to measure/operationalize.

Table 3.2 Heckman-probit selection model for coup attempts and success, 1950-2007.

VARIABLES	(Model 1) Coup attempt equation	(Model 1) Coup success equation
Appointed legislature	-0.679*** (0.194)	--
Elected legislature	-0.656*** (0.0937)	-0.226 (0.301)
Single party regime	-0.411*** (0.151)	--
Multiparty regime	-0.0941 (0.120)	--
Purges	0.280*** (0.0428)	-0.0958** (0.0394)
Ln GDP pc	-0.00101 (0.0588)	-0.139 (0.112)
Growth GDP pc	-0.961*** (0.323)	0.336 (0.584)
Dissent	0.255*** (0.0602)	0.0285 (0.153)
Growth military expenditures	0.0309 (0.0391)	0.0565 (0.0820)
Military personnel	-0.165*** (0.0360)	0.0934 (0.0726)
Military expenditure per soldier	-0.138*** (0.0528)	0.127 (0.114)
No. of previous coup attempts	0.0596*** (0.0158)	--
No. of previous successful coups	--	-0.0558 (0.0696)
Constant	0.804 (0.536)	0.935 (1.117)
athrho		-0.983** (0.480)
rho		-.75
Pseudo log-likelihood		-826.07353
Prob>chi2		0.0404
Wald χ^2		33.44
Observations	3,474	3,474

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Splines for temporal correction are included in both equations of the model, but omitted from presentation.

successful. In other words, an autocrat with an elected legislature is not more likely to survive a coup compared to his less institutionalized counter-part.

These results come in contrast with the second hypothesis and previous findings of the literature (Svolik 2012; Bove and Rivera 2015), but it makes intuitive sense since legislatures are a forum for political negotiation and compromise rather than specialized military units that can defend armed challenges to the leadership (Böhmelt and Pilster 2015). These contrasting results show that the negative effect of an elected legislature on coup success is actually driven by their effect on coup attempts because the selection effect is unaccounted for. Moreover, the results contrast again with previous literature and indicate that purging elites from the government reduces the chances of success of a coup. An explanation for this finding would be that the leader has already purged elites that were strong enough to win a challenge and the remaining elites are not capable of defending the incumbent should it come to a confrontation between plotters and the leader. The rest of the control variables do not exert a statistically significant effect on the likelihood of a successful coup.

The coup attempts equation shows that leaders of regimes with an appointed or elected legislature have a lower likelihood of coup attempts compared to leaders that closed the legislature. Moreover, a Wald test reveals that the coefficient for appointed legislature is not statistically different than the one for elected legislature. Substantively, this means that an open legislature, even unelected, reduces the likelihood of coup attempts in authoritarian regimes. This finding supports the hypothesis about the coup suppressing effect of institutions and further contrasts with previous findings in the literature (Bove and Rivera 2015). Furthermore, leaders of single party regimes are less likely to be challenged by regime elites, a finding that resembles similar research on the topic (Svolik 2012). However, regimes that allow multiple parties to exist do not seem to have a lower likelihood of coup attempts compared to regimes

that ban parties altogether. These findings lend support to the paper's main claim that institutionalized regimes have a lower likelihood of coup attempts compared to less institutionalized regimes. The results also indicate that purging governmental elites increases the likelihood of coup attempts. This finding offers support to Bove and Rivera's (2015) claim that elites no longer feel safe and seek to overthrow the incumbent to prevent being victims of inter-elite violence. Similarly, increased levels of dissent increase the likelihood of coups because these events offer elites the window of opportunity to legitimize their coup (Casper and Tyson 2014). The "coup-trap" argument receives support as well since a higher number of previous coup attempts increases the likelihood of coup attempts at the present (Londregan and Poole 1990). Economic growth decreases the risk of coups, while higher levels of GDP/capita do not exert a significant effect on the risk of coup attempts. The effect of military factors on coup attempts is negative (except for increases in military expenditures which is not statistically significant) and mostly in line with findings of previous research (Powell 2012).

These results offer support for the hypothesis that having a legislature reduces the likelihood of coup attempts in autocracies. The caveat to this finding is that the empirical test is not able to test the mechanism that was proposed in this chapter: preference falsification. The main challenge in testing this argument is that preference falsification, or lying, is hardly measurable. The alternative explanation of why having a legislature reduces coup attempts is that it reduces information asymmetry between the leader and elites (Svolik 2012; Bove and Rivera 2015) or that cooptation in the legislature offers benefits that could be lost should elites attempt a coup (Gandhi 2008). The main shortcoming of existing studies is that neither of the existing studies test the proposed mechanisms, only the effect of legislatures on coup propensity. More simply, we know that an autocracy with an open legislature is less likely to experience a coup, but we do not know which of the proposed mechanisms is at play in leading

to the observed outcome. Hence, our current understandings of how and why authoritarian legislatures reduce coup attempts suffers of observational equivalence and future studies should dig into trying to separate the mechanisms through which this happens.

The main objective of the paper is to test the effect of institutionalization on coup attempts. The selection process and correlation of error terms matter more for the estimation of the second equation (i.e. coup success) than for the first equation (i.e. coup attempts) (Van de Ven and Van Praag 1981). In other words, the errors from the second equation (coup success) are affected by the factors determining coup attempts as these come first in the data generation process, but the errors of the factors determining coup attempts are not affected by the second stage of the data generation process. For this reason, I estimate a probit model for the coup attempt equation to show that the suppressing effect of institutionalization on coup risk holds in this specification of the model²¹. The results of the probit model that estimates the effect of institutionalization on coup attempt risk in autocracies can be found in Table 3. The variable measuring the status of the legislature has been replaced with a dummy variable capturing whether a regime has a closed or open legislature (appointed or elected) considering that the test of coefficients discussed above. The coefficients and levels of statistical significance from Model 2 mirror closely the coup attempts equation from the Heckman-probit model. This shows that higher levels of institutionalization in authoritarian regimes (having an open legislature and a single regime party) lowers the likelihood of a coup attempts. More specifically, Figure 1 shows that a regime with an open legislature has a 4% probability of a coup attempt while a regime with a closed legislature has a probability of about 13%. In other words, closing the legislature more than triples an autocrat's risk of being challenged by members of its ruling

²¹ The results of the models in Table 2 and 3 are robust to alternative specifications of the models and operationalization of the key independent variables. A discussion presentation of these can be found in the online appendix.

coalition. Furthermore, Figure 2 shows that having a regime with a single party have a 5% predicted probability of a coup attempt compared to 8% for no-party regimes and almost 8% for multi-party regimes. In this case, the likelihood of coups in single party regimes is about 70% lower compared to regimes with other political party status.

Figure 3.1 Effect of elected legislature on coup attempts.

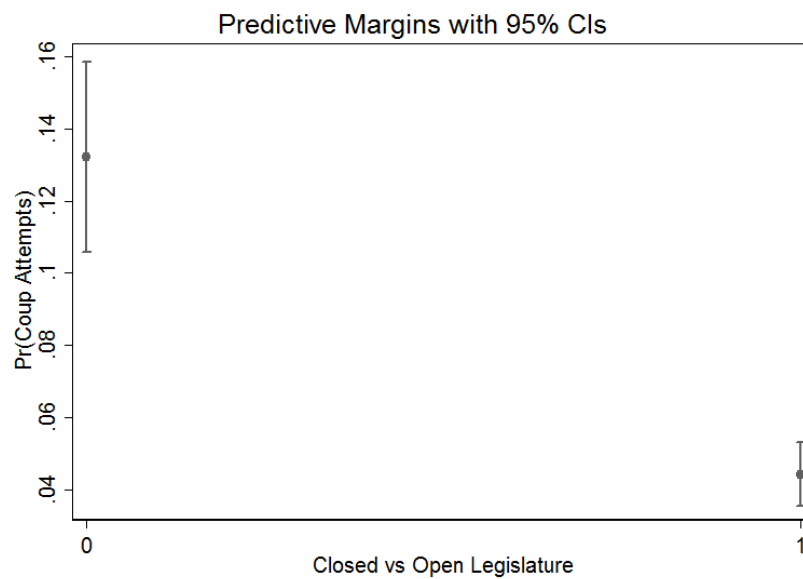


Figure 3.2 Effect of political parties' status on coup attempts.

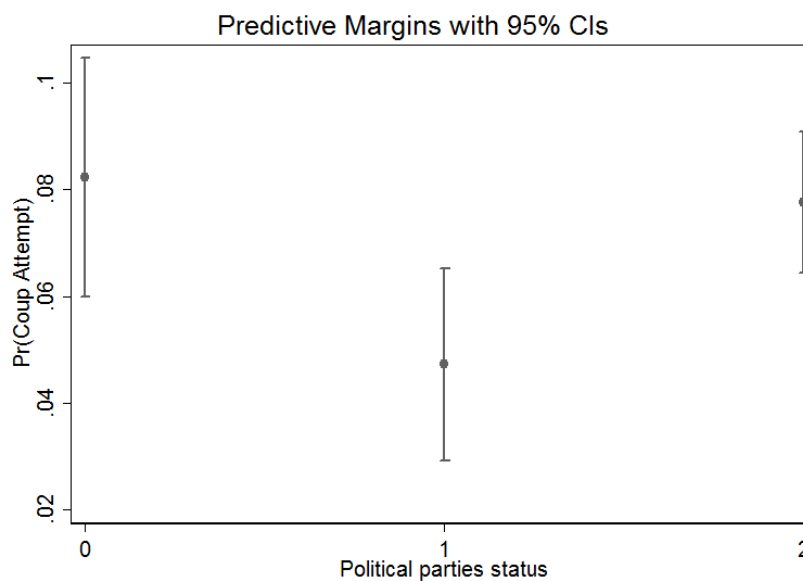


Table 3.3 Institutionalization and coup attempts in authoritarian regimes, 1950-2007.**Probit regression.**

VARIABLES	(Model 3) Coup Attempt	(Model 4) Coup Attempt
Open legislature (appointed or elected)	-0.684*** (0.0951)	-0.729*** (0.131)
Single party regimes	-0.350** (0.159)	-0.251* (0.152)
Multiple party regimes	-0.0394 (0.112)	-0.0667 (0.157)
Purges	0.281*** (0.0441)	0.308*** (0.0720)
Ln GDP pc	0.00475 (0.0584)	-0.0448 (0.0622)
Growth GDP pc	-0.964*** (0.330)	-1.450*** (0.402)
Dissent	0.263*** (0.0614)	0.238*** (0.0814)
Growth military expenditures	0.0322 (0.0406)	0.0592 (0.0529)
Military personnel	-0.170*** (0.0353)	-0.119*** (0.0411)
Military expenditure per soldier	-0.147*** (0.0527)	-0.221*** (0.0617)
Effective Number of Military Organizations	--	-0.530 (0.400)
Effective Number of Military Organizations, squared	--	0.151* (0.0910)
Military regime	--	0.0302 (0.134)
Number of previous coup attempts	0.0648*** (0.0153)	0.0703*** (0.0202)
Constant	0.813 (0.530)	1.998*** (0.619)
Observations	3,477	2,393

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Splines included for temporal correction, but omitted from presentation.

The literature on coup determinants has focused a lot on the role of military organizations and how autocrats use them in deterring armed challenges to their rule (Powell 2012; Böhmelt and Pilster 2015). One contention to these results would be that autocrats could

chose to structurally coup-proof by fractionalizing the armed forces so that to create a rivalry between their organizational interests. This in turn would lead to military organizations counterbalancing each other's power and give the leader tools to not only deter coups, but also fight them should they occur. Previous literature found that structural coup-proofing does not affect coups' success, but it does decrease the risk of coup attempt when a regime has two equally strong military organizations (Böhmelt and Pilster 2015). Furthermore, military regimes have been found to be more coup prone as military leaders already control the resources to challenge the incumbent (Belkin and Schofer 2003). To account for these alternative hypotheses about coup attempts, in Model 5 I include a normal and squared term of structural coup-proofing²² from Böhmelt and Pilster (2015) and I control for military regimes by including a dummy variable for regime type from Geddes, Wright and Frantz (2014). The results differ from the findings of Böhmelt and Pilster (2015) and seem to indicate that, when accounting for institutionalization, structural coup-proofing does not exert a statistical significant effect on the likelihood of coup attempts. The signs of the coefficients show there is a non-linear relationship between structural coup-proofing and coup attempts, but it misses conventional levels of statistical significance. Furthermore, the coefficient of military regimes is positive, but not statistically significant. In other words, military regimes do not seem to have a higher likelihood of experiencing coups once accounting for institutionalization.

3.9 Conclusion

How can autocrats protect themselves from coups and increase their tenure in office? Previous literature offers a two-fold answer for this question: first, authoritarian leaders can use

²² Structural coup proofing is measured as the ratio of paramilitary personnel to regular army personnel. For more details on the coding of this variable see Pilster and Böhmelt (2011; 2012).

structural coup-proofing to deter armed challenges to their rule by fractionalizing and polarizing the armed forces (Böhmelt and Pilster 2015). Second, they can institute an elected legislature to co-opt elites that might obtain the support to successfully challenge the leader (Svolik 2012; Bove and Rivera 2015). The former literature is overly focused on the role of military organizations in coup-proofing the regime, while the latter focuses only on the successful incidents of coups, thereby discarding a lot of information regarding the factors that determine coups in the first place. This paper thought of contributing to the literature on the determinants of coup attempts and success by considering how institutionalization (i.e. the adoption of legislature and political parties) strategies of autocrats can help them avoid and survive coups. The main argument built on the idea that institutions help autocrats minimize the conflict potential between the leader, elites in power and the population by increasing the stakes in the survival of the regime. Adding to this, the paper argues the risk of coups is diminished because members of the ruling coalition falsify their preferences regarding the leadership. This in turn, leads to elites encountering collective action problems as they do not have a common understanding of their joint preference since cannot distinguish between loyal and opportunistic supporters of the leader. Furthermore, because coups are highly uncertain in terms of consequences and outcome, institutions offer elites safer mechanisms to challenge the leadership.

The theoretical argument was tested using a two-stage model for coup attempt probit model of coup attempts and outcome. The results strongly supported the argument that institutionalization reduces the risk of coup attempt. It showed that institutionalization plays a significant role in suppressing the risk of coup attempts by a threefold reduction in the coup risk for autocracies with an open legislature. Similarly, a regime with a single political party or a united regime front reduces the coups risk by about 70% compared to regimes that chose to

regulate political parties differently. More importantly, these findings are robust to various specifications of the models. However, the results show that, once we account for the selection effect, having an elected legislature no longer protect leaders from surviving a coup. This contrasts with previous findings (Svolik 2012; Bove and Rivera 2015) and shows that the suppressing effect of institutionalization is mainly driven by its effect on coup attempts, not success. Another result that contrasts with previous findings is that structural coup-proofing does not protect autocrats from coup attempts (Böhmelt and Pilster 2015).

These results have several implications for the literature on coup determinants and authoritarian politics. First, it qualifies previous findings about the stabilizing role of seemingly democratic institutions in authoritarian regimes (Gandhi 2008; Svolik 2012). More precisely, establishing authoritarian institutions preserve stability of authoritarian regimes and help explain some of the longest reigning dictatorships in the world (e.g. China, Mexico, USSR, etc.). Second, there seems to be strong indications that military coup-proofing does not help authoritarian regimes in averting coups, but it can increase the risk of civil war (Powell 2015). In other words, authoritarian leaders do not trade-off one risk for another (coups vs civil war) (Roessler 2011), but rather they increase both these risks simultaneously and actually speed up their demise from office (Bell and Sudduth 2015). Finally, these results still do not explain what is an appropriate strategy for leaders to survive a coup is attempted. While institutionalization reduces the risk of an attempt, it does not seem to help once a coup is attempted. Future research could seek to see the conditions under which leaders can survive coups as the current literature does a poor job in explaining this. Another avenue for future research should focus on how institutionalization influences both violent and non-violent forms of collective action directed against authoritarian regimes. Studying the relationship between civil wars, respectively non-violent campaigns, and institutionalization is important for the following reasons: civil wars

have been found to extremely costly in terms of human and financial capital (Lacina 2006; Braithwaite, Kucik, and Maves 2014), while non-violent campaigns, despite being less common than other forms of contention, have been found to be extremely efficient in unseating leaders of authoritarian regimes (Chenoweth and Stephan 2011). These types of studies would greatly complement the existing literature on authoritarian politics and institutions.

3.10 Appendices

3.10.1 Replication of Bove and Rivera (2015)

The findings of the paper contradict previous findings on the effect of institutions on coup activity (Svolik 2012; Bove and Rivera 2015). Table 3.1 from Appendix replicates the model of Bove and Rivera to show that the null effect of the elected legislature on coup success is not due to some quirks of the data, but because of the selection effect (Böhmelt and Pilster 2015). Model A1 from Table 3.1. from Appendix replicates the original model and findings of Bove and Rivera (2015). On a closer inspection of their data I found some inconsistencies in their sum of previous successful coups as this variable does not accurately counts previous instances of successful coups. Hence, in Model 2 I include a variable that accurately sums previous instances of successful coups for a country²³. When replacing this variable, the results do not change substantively, only the size of the coefficients differs slightly. The only difference between the two models is that the number of previous successful coups from Model A2 does not have a significant effect of the likelihood of a successful coup at time t . This indicates that there seem to be no such “coup-trap”, at least when looking at instances of successful coups (Londregan and Poole 1990).

Next, the data structure of time series cross-sectional research designs automatically implies that data is temporally dependent. This means that the assumption of independent observations is violated and not correcting this can lead to overly optimistic inferences and bias in the coefficients (usually inflated t-values) (Beck, Katz and Tucker 1998). In their study on the effect of elected legislature on coup success, Bove and Rivera (2015) fail to include any variables that account for temporal dependency. Model A3 represents their exact model

²³ To do this, I rely on the functionalities of the BTSCS Stata add-on provided by Beck et al (1998). This automates the sum of previous instances of a certain event which in turn minimizes the potential for error.

specification with corrected number of previous successful coups and temporal splines included to account for temporal dependency. In this case, accounting for temporal dependency, does not change significantly the findings of their paper. Finally, and more importantly, Model A4 returns to the original model specification of Bove and Rivera (2015) with corrected number of previous coups (Model A2), but replaces the elected legislature dummy variable with a categorical unordered variable capturing the status of the legislature (closed, appointed or elected)²⁴. The results indicate that both an appointed and elected legislature reduce the likelihood of coups compared to a regime with a closed legislature. More importantly, the Wald test of coefficient significance shows that there is no statistically significant difference between the coefficient for appointed and elected legislature. From this we can conclude, that the original findings of Bove and Rivera (2015) regarding the negative effect of elected legislature on coup success is misleading since the main difference seems to be between having a closed and an open legislature, not whether it is elected or not.

²⁴ Closed legislature is the reference category, reason for which it is not included in the model.

Appendix 3.1 Replication Bove and Rivera (2015). Elected legislature and coup success.

Variables	(Model A1) Coup success	(Model A2) Coup success	(Model A3) Coup success	(Model A4) Coup success
Appointed legislature	--	--	--	-0.783*** (0.222)
Elected legislature	-0.908*** (0.0982)	-0.889*** (0.0965)	-0.854*** (0.105)	-0.986*** (0.0998)
Purges	0.101* (0.0573)	0.109* (0.0616)	0.103* (0.0598)	0.101* (0.0598)
Ln GDP pc	-0.0440 (0.0595)	-0.0232 (0.0576)	-0.0117 (0.0572)	-0.0175 (0.0590)
Growth GDP pc	-0.964*** (0.365)	-0.945*** (0.364)	-0.965*** (0.361)	-0.961*** (0.370)
Dissent	0.367*** (0.0743)	0.339*** (0.0716)	0.349*** (0.0720)	0.342*** (0.0709)
Growth military expenditures	0.0438 (0.0490)	0.0184 (0.0478)	0.0284 (0.0472)	0.0276 (0.0483)
Military personnel	-0.180*** (0.0380)	-0.184*** (0.0349)	-0.175*** (0.0354)	-0.164*** (0.0349)
Military expenditure per soldier	-0.142** (0.0617)	-0.107* (0.0569)	-0.109* (0.0562)	-0.132** (0.0586)
Past coups	0.0868*** (0.0129)	--	--	--
Number of previous coups	--	0.0741 (0.0480)	0.0611 (0.0491)	0.0582 (0.0499)
Spline(1) ^e	--	--	0.000131 (0.000575)	--
Spline(2) ^e	--	--	-9.86e-05 (0.000447)	--
Spline(3) ^e	--	--	3.98e-05 (0.000131)	--
Constant	0.307 (0.531)	0.273 (0.570)	0.214 (0.572)	0.497 (0.592)
Observations	3,333	3,333	3,333	3,333

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

3.10.2 Alternative specifications of the Heckman selection probit model

Clarke (2005) argues that the inclusion of control variables might increase or decrease our bias of the estimates. Model A5 from Table 3.2 from Appendix takes this into consideration and includes only the key independent variables (legislature and political parties' status) from

Model 1 from the paper alongside the temporal controls. The results from this simple model are the same as the main findings of the paper: an appointed or elected legislature reduce the likelihood of coup attempts, while an elected legislature does not reduce the success likelihood of a coup. Moreover, the correlation of errors between the two stages is still statistically significant.

The coup success equation from Model 1 from the main text of the paper departs from previous research (Bove and Rivera 2015) by including temporal controls in the baseline model. I run another Heckman model without temporal controls in the coup success equation to test the robustness of the finding that elected legislatures do not have a statistical significant effect on the likelihood of successful coups. The only difference between Model A6 from the online appendix and the main Heckman probit from the paper is that the correlation of errors between the two stages misses conventional levels of statistical significance. More importantly, in this specification elected legislatures do not have a statistically significant effect on likelihood of successful coups while the rest of the results remain identical with the ones in the paper. Finally, I use an alternative dependent variable for successful coups. Powell and Thyne (2011) code coups as successful if they managed to unseat the leader for at least a week. In the current dataset, there are 121 successful coups identified by Powell and Thyne (2011) and 163 identified by Bove and Rivera (2015) from Archigos (Goemans, Gleditscha and Chiozza 2009). Table 3.3 from Appendix contains another Heckman probit (Model A7) that uses this alternative dependent variable for the success equation. The results are identical with the ones of the Heckman model from the main text of the paper, except for the correlation of errors which barely miss the 90% level confidence level ($\text{Prob} > \chi^2 = 0.1003$).

Appendix 3.2 Legislature status and coup attempts and success, Heckman probit.

EQUATION	VARIABLES	(Model A5)	(Model A6)
Successful coup	Elected legislature	-0.223 (0.237)	-0.391 (0.345)
	Purges	--	-0.0834** (0.0391)
	Ln GDP pc	--	-0.136 (0.118)
	Growth GDP pc	--	0.0976 (0.695)
	Dissent	--	0.130 (0.175)
	Growth military expenditures	--	0.0911 (0.0855)
	Military personnel	--	0.0732 (0.0830)
	Military expenditure per soldier	--	0.109 (0.121)
	Number of previous successful coups	-0.0408 (0.0439)	-0.0746 (0.0796)
	Constant	1.291*** (0.214)	1.018 (1.150)
Coup attempt	Appointed legislature	-0.853*** (0.157)	-0.716*** (0.194)
	Elected legislature	-0.742*** (0.0760)	-0.673*** (0.0945)
	Single party regime	-0.324*** (0.0981)	-0.396** (0.162)
	Multiple parties regime	0.0797 (0.0863)	-0.0734 (0.118)
	Purges	--	0.284*** (0.0438)
	Ln GDP pc	--	-0.00240 (0.0591)
	Growth GDP pc	--	-0.966*** (0.325)
	Dissent	--	0.253*** (0.0604)
	Growth military expenditures	--	0.0293 (0.0393)
	Military personnel	--	-0.166*** (0.0362)
	Military expenditure per soldier	--	-0.137*** (0.0527)
	Number of previous coup attempts	0.0455***	0.0627***

	(0.0140)	(0.0160)
Constant	-0.824***	0.788
	(0.0783)	(0.539)
Pseudo log-likelihood	-1067.20	-832.60
Prob>chi2	0.0109**	0.2027
Wald χ^2	15.93	21.93
Observations	4,147	3,474

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Splines are included in the model, but are excluded from presentation.

Appendix 3.3 Heckman probit selection model with coup attempts and success from Powel and Thyne (2011).

EQUATION	VARIABLES	(Model A7)
Successful coup	Elected legislature	-0.425 (0.382)
	Purges	0.0408 (0.0922)
	Ln GDP pc	-0.0678 (0.152)
	Growth GDP pc	1.598*** (0.581)
	Dissent	-0.0932 (0.144)
	Growth military expenditures	0.0123 (0.0991)
	Military personnel	0.00635 (0.0799)
	Military expenditure per soldier	0.0932 (0.132)
	Number of previous successful coups	-0.0666 (0.0604)
	Constant	0.856 (1.207)
Coup attempt	Appointed legislature	-0.706*** (0.197)
	Elected legislature	-0.656*** (0.0996)
	Single party regime	-0.435** (0.170)
	Multiple parties regime	-0.0999 (0.134)
	Purges	0.276*** (0.0435)
	Ln GDP pc	-0.000282 (0.0598)
	Growth GDP pc	-0.954*** (0.325)
	Dissent	0.255*** (0.0605)
	Growth military expenditures	0.0332 (0.0395)
	Military personnel	-0.164*** (0.0366)
	Military expenditure per soldier	-0.139***

	(0.0536)
Number of previous coup attempts	0.0563***
	(0.0182)
Constant	0.820
	(0.551)
Pseudo log-likelihood	-822.07
Prob>chi2	0.1003
Wald χ^2	24.88
Observations	3,474
Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Splines are included in the model, but are excluded from presentation.	

3.10.3 *Alternative specifications of the probit model*

Model A8 from Table 3.4 from Appendix includes an unordered categorical variable for the status of the legislature (with closed legislature as baseline). The Wald test of the coefficients confirms the decision to include a dummy variable for open legislature in the main model in main text of the paper since the coefficients for appointed and elected legislature are not statistically significant from each other. They are only statistically significant compared to a closed legislature. Model A9 accounts for more qualitative differences between regime types based on the Geddes, Wright and Frantz (2014) typologies of regimes. Despite the inclusion of these variables (monarchy as baseline), the main findings of the paper remain unchanged.

**Appendix 3.4 Probit model with unordered categorical variable
institutionalization and regime types**

VARIABLES	(Model A8) Coups attempts	(Model A9) Coups attempts
Appointed legislature	-0.729*** (0.197)	--
Elected legislature	-0.679*** (0.0944)	-0.682*** (0.103)
Single party regime	-0.353** (0.158)	-0.406** (0.164)
Multiple parties regime	-0.0413 (0.110)	-0.101 (0.120)
Purges	0.281*** (0.0440)	0.279*** (0.0447)
Single-party	--	0.426** (0.202)
Military	--	0.547*** (0.198)
Personalist	--	0.544*** (0.201)
Ln GDP pc	0.00413 (0.0585)	0.0381 (0.0627)
Growth GDP pc	-0.964*** (0.330)	-0.996*** (0.334)
Dissent	0.263*** (0.0614)	0.251*** (0.0638)
Growth military expenditures	0.0325 (0.0405)	0.0128 (0.0408)
Military personnel	-0.169*** (0.0355)	-0.168*** (0.0364)
Military expenditure per soldier	-0.148*** (0.0527)	-0.148*** (0.0494)
Number of previous coup attempts	0.0645*** (0.0153)	0.0559*** (0.0164)
Spline(1) ^e	0.000950 (0.000699)	0.000759 (0.000704)
Spline(2) ^e	-0.000627 (0.000467)	-0.000526 (0.000473)
Spline(3) ^e	0.000201 (0.000142)	0.000182 (0.000145)
Constant	0.820 (0.529)	0.147 (0.615)
	3,477	3,477

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Appendix 3.5 Probit model of coups success with status of political parties

VARIABLES	(Model A10) Coup success
Elected legislature	-0.823*** (0.101)
Political parties' status	-0.0637 (0.0601)
Purges	0.103*** (0.0273)
Ln GDP pc	-0.00811 (0.0627)
Growth GDP pc	-0.973*** (0.365)
Dissent	0.365*** (0.0635)
Growth military expenditures	0.0291 (0.0429)
Military personnel	-0.176*** (0.0371)
Military expenditure per soldier	-0.116** (0.0580)
Number of successful coups	0.0645* (0.0346)
Constant	0.310 (0.500)
Observations	3,333

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

4. Do they know something we don't? Diffusion of repression in authoritarian regimes

4.1 Abstract

The use of repressive strategies by authoritarian regimes received a great deal of attention in the literature, but most explanations treat repression as the product of domestic events and factors. However, the similarity in repressive actions during the Arab Spring or the intense collaboration in dissident disappearances between the military regimes of Latin America indicate a transnational dimension of state repression. This transnational dimension of repression and authoritarian interdependence has gone largely understudied. The article develops a theory of diffusion of repression between autocracies through emulation and learning via autocratic peer groups. It proposes that the high costs of repression and its uncertain effect on dissent determines autocrats to update their knowledge and information about appropriate levels of repression to eliminate dissent and prolong their political survival. Autocracies own experience with dissent and repression offers only incomplete information which makes autocracies to look outside their borders to update their beliefs and information about repression. Then, they adjust their levels of repression based on observed levels of repression in their institutional and experiential peers. The results indicate that authoritarian regimes emulate and learn from regimes with which they share similar institutions. Surprisingly, the results indicate that regimes with similar dissent experience do not emulate and learn from each other. The results also indicate that regional conflict does not affect autocracies' levels of repression.

4.2 Introduction

Operation Condor was a secret intelligence network created by the military regimes of Argentina, Chile, Uruguay, Paraguay, Bolivia, Brazil, and joined later by Ecuador and Peru,

with the aim to hunt down and eliminate leftists and dissidents that could oppose the right-wing military bureaucratic states. These regimes cooperated in sharing intelligence and methods of torture against political opponents. Starting with the 1960s, intelligence officers from other Condor countries travelled to Brazil for training in interrogation techniques and methods of repression (McSherry 2002). Similarly, interior ministers of the Arab League met regularly since the early 1980s, under the auspices of the Arab Interior Ministers Council, to innovate and share new technologies of repression (Yom 2016). These examples provide some indication there is a transnational dimension to authoritarian repression. The repressive nature of authoritarian regimes has received a lot of attention (Davenport 2007a; Svolik 2012), but its transnational dimension²⁵ has gone largely understudied (Mattes and Rodríguez 2014; Soest 2015). In light of this, the article examines how domestic factors create transnational linkages between autocracies and how these linkages facilitate diffusion of repression. More precisely, I argue that repression diffuses between autocracies through emulation and learning from regimes with similar structural characteristics (i.e. institutions) and challenges (i.e. dissent).

The empirical literature on state repression has extensively examined various demographic, economic, social, political, and regime type factors that explain why, how, and when states use terror against their own citizens (Davenport 2007b; Abouharb and Cingranelli 2007; Nordås and Davenport, 2013; Hill and Jones 2014; Sullivan 2016; Rivera 2016). Similarly, the literature on authoritarian politics investigates how autocracies survive through a combination of repression and co-optation (Escribà-Folch 2013; Frantz and Kendall-Taylor 2014; Gandhi 2008; Svolik 2012). Both build on the (implicit) assumption that state repression is primarily the product of domestic events and factors. While they offer compelling

²⁵ This is used interchangeably with interdependence, transnational linkages or dependence. It refers to the idea that repression in one autocracy is influenced by levels of repression in other autocracies.

explanations of state repression, they have not explicitly discussed the (tacit) assumption of unit independence, mostly overlooked its spatial context and how domestic factors can be embedded in transnational linkages that impact autocracies' domestic repression. This is problematic for our understanding of state repression because *“ignoring or inadequately modeling interdependence processes leads analysts to exaggerate the importance of common shocks, privileging contextual, exogenous-external, unit-level, or domestic-factor accounts”* (Franzese and Hays 2008: 752). Furthermore, incorporating insights about the effect of transnational linkages on state repression offers a more nuanced and comprehensive understanding of the inputs and outputs of repression in authoritarian regimes.

The article revisits the core model of state repression and elaborates theoretically on the transnational dimension of repression. It proposes that an autocracy's level of repression is influenced by other autocracies' levels of repression. I argue that autocrats adjust their levels of repression by emulating and learning from other autocracies with which they share the same strategic objective: survive in office (Bueno de Mesquita et al. 2003). The uncertain effect of repression on dissent leads autocracies to move beyond their own experience with dissent and repression, and update their knowledge about repressive tactics from outside sources (Lichbach 1987; Moore 1998, 2000; Davenport 2007b; Lyall 2009; Kocher, Pepinsky and Kalyvas 2011). Autocracies use cognitive shortcuts (heuristics) to identify the most relevant sources of information and knowledge on repressive strategies. Institutional and experiential similarity serve as heuristics and lead to creation of autocratic peer groups that provide satisfying, proximate models of repression (Neumayer, Plümper and Epifanio 2014; Odinius and Kuntz 2015), which in turn facilitate the diffusion of repression between authoritarian regimes.

Accordingly, I test the theoretical expectations regarding diffusion of repression between authoritarian regimes in a time-series cross-sectional research design that includes data on state

repression from the Varieties of Democracy (V-Dem) Project (Coppedge et al. 2016) with a Spatial Ordinary Least Squares (S-OLS) model that includes single and multiple spatial lags of repression (Franzese and Hays 2007, 2008; Hays, Kachi, and Franzese, 2010). The analysis suggests that repression diffuses between institutionally similar regimes (institutional peers), but not between regimes that face similar dissent (experiential peers). Furthermore, the results also indicate that the transnational dependence in state repression is driven by spill over in the outcomes (e.g. repression), not in the covariates (e.g. conflict). These results are robust to alternative explanations and model specifications, alternative measures of the dependent variable, and estimation using ordinary least squares and maximum likelihood spatial models.

These results have several implications for our understanding of state repression and authoritarian politics (Carey 2010; Frantz and Kendall-Taylor 2014; Svolik 2012). With respect to state repression, this article shows that there is a transnational dimension that drives domestic levels of repression in authoritarian regimes. With respect to diffusion processes in conflict, I show that not only externalities of conflict diffuse between regimes, but also regimes' strategies for dealing with the opposition (Bormann and Hammond 2016; Buhaug and Gleditsch 2008; Salehyan 2007; Salehyan and Gleditsch 2006). Finally, in relation to international dimensions of authoritarian rule, this is the first study that goes beyond comparative case studies to provide systematic evidence of diffusion of repression between authoritarian regimes (Bader 2015; Odinius and Kuntz 2015; Tolstrup 2015; Way 2015).

4.3 Repression and political order

Repression is one of the primary tools that autocrats use to enforce political order, undermine the opposition and survive in office (Bueno de Mesquita et al. 2003; Escribà-Folch 2013; Gandhi 2008; Svolik 2012; Frantz and Kendall-Taylor 2014; Rivera 2016; Sullivan 2016). Although autocrats use a combination of repression and co-optation to rule, repression

seems to be crucial in helping leaders prolong their survival in office (Escribà-Folch 2013). Repression has been conceptualized as the actual or threatened use of physical sanctions against individuals or organizations, within the territory of the state, with the purpose of imposing a cost on the target and deterring specific activities or beliefs perceived to be challenging or subversive to the government (Goldstein 1978).

The logic of using repression has been explained from a strategic and cost-benefit perspective. The former contends that repression is used with the objective of setting the limits within which citizens can act, to control or eliminate challenges (real or imagined) to the regime's social and political order, and facilitate movement in a particular direction (in terms of development strategy or ideological orientation) (Davenport 2007b). Moreover, repression allows regimes that face domestic threats to extract relevant information from their opponents, while also trying to dissuade, counter and suppress their activities that aim to challenge and undermine state power (Moore 1998; Rivera 2016). From a cost-benefit perspective, leaders carefully weigh the costs and benefits of using repression, its alternatives, and its likelihood to destroy the opposition. Simply put, if the benefits exceed the costs, alternatives are not viewed favourably, and there is a high probability of success, then increased repression is expected. However, if the costs exceed the benefits, there are alternatives and the probability of success is low, then very little or no repression is expected (Moore 2000; Shellman 2006). These explanations about the use of repression are based on the assumption that repression is primarily driven by domestic factors and processes. Clearly, scholars of state repression have not assumed states to be independent units that are not affected by the decisions of other states. However, not much of the work on state repression elaborates theoretically on the assumption of unit interdependence, nor tests its empirical implications (Bell, Clay, and Murdie 2012; Danneman

and Ritter 2014; Elkins and Simmons 2005; Franzese and Hays 2007). There are two reasons why we should unpack unit interdependence when examining state repression.

First, there is evidence that violence, in the form of protests, riots or civil war, tends to permeate national boundaries and to diffuse between countries (Salehyan 2007; Salehyan and Gleditsch 2006; Buhaug and Gleditsch 2008; Bormann and Hammond, 2016). Danneman and Ritter (2014) find that states increase repression early to prevent externalities from neighbouring civil wars. Similarly, Bell, Clay and Murdie (2012) find that presence of human rights organizations in countries' neighbourhood improves country's human rights performance. However, these studies focus on spill overs of events and actors from neighbouring countries, not spill over in the outcome of interest (i.e. repression). More generally, there is an extensive literature on policy diffusion that shows that political actors, governments or non-state groups, follow each other's decisions and actions across units' boundaries (Gilardi 2010; Bamert, Gilardi and Wasserfallen 2015; Böhmelt, Ruggeri and Pilster 2017; Braithwaite, Maves and Kucik 2015; Neumayer, Plümper and Epifanio 2014). For example, Jordan inspired its constitutional reforms from the politically similar, geographically distant, monarchy of Morocco to prevent experiencing mass protests during the Arab Spring (Bank and Edel 2015). Then, if dissent and policy choices diffuse between countries, it seems quite unrealistic that government strategies to counter it would not. Besides some comparative case studies (Bader 2015; Lynch 2014; Odinius and Kuntz 2015; Soest 2015; Tolstrup 2015; Way 2015), we still lack any systematic examination of the drivers and sources that facilitate diffusion of repression between authoritarian regimes.

Second, repression is costly because it involves allocation of resources, sacrifice of human life and (potential) political backlash. Additionally, we cannot reasonably expect the government to have the capacity to repress all forms of mobilization and challenges (Wintrobe

2000; Sullivan 2016). Moreover, repression can increase dissent by undermining the legitimacy of the regime and exacerbating population grievances (Lichbach 1987; Moore 1998). If regimes use repression pre-emptively, in the expectance of conflict, they alienate their citizens and can transform their latent grievances into active antagonism (Thoms and Ron 2007). Hence, an erratic use of repression by governments can actually defeat its purpose by increasing dissent rather than diminishing it. Then, regimes are forced to understand better the conditions under which, what are the targets and to what extent increases in state repression can diminish dissent. One commonly used avenue for this is regimes' previous experiences with repression. The issue with this approach is that government agencies will seek to perpetuate this behaviour in order to justify their existence rather than learn from it and adapt accordingly (Carey 2006; Davenport 1996; Davis and Ward 1990). During the Arab Spring, the Bahraini government used repression techniques such as house raids that were common during the so-called Intifada in the 1990s, yet the strategic environment of the two uprisings was largely different (Ulrichsen 2013). As such, reliance on previous experiences with repression can lead to situations when autocracies rely on outdated or sub-optimal methods of repression. However, regimes with similar structural characteristics or challenges can provide additional information through proximate and satisfying models of repression.

4.4 Diffusion of repression

Considering that repression can be socially and politically costly, and (possibly) ineffective, what are the sources that inform and help autocrats update their knowledge and adjust their repressive tactics? I argue that information obtained from institutionally and experientially similar autocracies serves as an input into the decision-making that autocrats make about domestic levels of repression. Autocrats use repression strategically to set limits for social and political participation, to eliminate challengers and force society in the direction

(ideological, economic, social, etc.) envisioned by the leader and its ruling coalition. Besides domestic level factors and past experience with repression, autocrats learn and emulate their peers for a more efficient use of repression (Böhmelt, Ruggeri and Pilster 2017; Neumayer, Plümper and Epifanio 2014). Then, we observe a diffusion of repression between institutionally and experientially similar autocracies.

Diffusion has been conceptualized as interdependence among units (i.e. regimes, countries, etc.), where the adoption of a practice by one unit affects the probability that another unit will adopt the same practice (Elkins and Simmons 2005). In this case, levels of repression in one (or several) authoritarian regime(s) influences domestic levels of repression in other authoritarian regime(s) as they emulate and learn from each other (Gilardi 2016). Learning implies that regimes learn, in a rational Bayesian or other form, something about the consequences of the other actors' actions. Emulation is more ritualistic by simply following or doing oppositely of others (Franzese and Hays 2008). Learning implies agency and rationality on behalf of actors, while emulation implies simply mimicking successful actions without understanding the underlying reasons leading to success²⁶ (Simmons, Dobbin and Garrett 2007). In its determination to preserve one party rule, the Communist Party of China examined the causes of failure of the Soviet Union, the workings of other one party regimes and the success of one-party rule in Singapore (Shambaugh 2008; Ortmann and Thompson 2014). The Syrian regime's infiltration and obstruction of mass demonstrations shows striking similarities with the tactics used by the Iranian regimes to disrupt the Green movement in 2009. Furthermore, the attempt of the Syrian regime to court Christian community leaders and make

²⁶ It is beyond the scope of this article to try to differentiate empirically when regimes learn and when they emulate. For a useful review about the various mechanisms of diffusion and associated theoretical and empirical challenges in diffusion studies see Gilardi (2016).

implicit deals with Kurdish groups resembles the Iranian's regime strategy to take advantage of the disconnect between minority groups from the provinces and the Green movement.

Repression diffuses between regimes as they emulate and learn from their peers by observing their actions and/or cooperating with them. For instance, the regime of Bashar al-Assad formed a special committee whose aim was *“to examine the possibility of protest spreading to Syria, and how to avert or respond to them”* (Abbas 2011: 1). The Syrian President hinted at learning by blaming the failures of these regimes on their inability to upgrade and adapt with the changes in society, both as state and institutions (Heydemann and Leenders 2014). Conversely, cooperation between authoritarian regimes takes several forms, ranging from intelligence and data sharing to active involvement in suppressing popular protests in other autocracies. For example, during Operation Condor, the intelligence services of the participating countries would organize cross-border “disappearances” operations of dissidents and leftists or would actively share intelligence and data over a specially established telecom system (McSherry 2002). During the Arab Spring, Jordan provided advice and expertise to Kuwait on improving policing methods, and increased coordination and consultation with Bahrain on security and policing issues. Also, the head of the Revolutionary Guards of Iran admitted that his security forces were giving intellectual and advisory help, and exchanging experiences with the forces of the Syrian regime (Heydemann and Leenders 2014).

Autocracies learning and emulation encounter the problem of selection from who to obtain information regarding appropriate levels of repression. The main issue with selecting who to observe is that regimes' ability to interact, observe, collect and process information is bounded by their own capacity. To circumvent this problem, autocracies rely on cognitive shortcuts (heuristics) to select the regime from which to extract information and know-how, and make sense of complicated policy choices in an uncertain environment (Kahneman, Slovic,

and Tversky 1982). Autocracies regimes imitate similar regimes because a shared sense of similarity is indicative of common interests regarding their policy choices and objectives²⁷ (Elkins and Simmons, 2005). In this particular setup, similarity between regimes is captured by structural characteristics and challenges. The former is conceptualized as institutionalization (i.e. legislature and political parties) as best response to potential for outward opposition and conflict in a regime (Gandhi 2008), while the latter is conceptualized as manifestations of outward dissent against the regime.

4.5 Institutional and experiential authoritarian peers

Structural characteristics refer to the use of political institutions (political parties and legislature) to co-opt the opposition (Gandhi 2008; Svolik 2012). The logic of why autocracies adjust repression levels from institutionally similar regimes is the following: institutionalization as a cooptation mechanism arises in an autocracy as a best response to the potential for conflict and violence between the regime and opposition (Gandhi 2008). More simply, autocracies use legislatures and political parties to offer concession to an opposition that cannot be destroyed through repression. Institutions help authoritarian leaders differentiate better between supporters and opponents, and facilitate more selective repression (Svolik, 2012; Frantz & Kendall-Taylor, 2014). Then, institutionally similar regimes face similar structural weaknesses towards the opposition. Svolik (2012) finds that autocrats with a legislature and a political party are less likely to be ousted from office via an uprising or a coup. Similarly, Ulfelder (2005)

²⁷ This goes beyond the idea of geographic proximity because geographic “neighbour variables” may successfully capture diffusion, but are incapable of determining why policies diffuse (Baybeck, Berry, and Siegel, 2011), they can be misleading and outdated (Shipan and Volden, 2012), or they are not a comprehensive proxy for the policy diffusion network (Desmarais, Harden and Boehmke, 2015). A geographic neighbour spatial lag of repression was included as a robustness check to account for unobserved heterogeneity that leads to geographic clustering of repressive countries. The results reported in the empirical section remain unchanged.

finds that single-party regimes are more likely to breakdown due to strikes, but are largely unaffected by riots.

Autocracies screen institutionally similar regimes for more information and knowledge regarding repression as a tool for authoritarian survival (Escribà-Folch, 2013). Research on alliance formation and treaty ratification shows that regimes with similar institutions are more likely to form alliances and cooperate internationally due to shared policy preferences (Downs, Rocke, and Barsoom 1996; Koremenos, Lipson, and Snidal 2001; Leeds 1999). Then, similar institutions serve as signaling device of shared policy objectives: (in)ability to control the opposition and mobilization vulnerabilities (Ulfelder 2005). Repression is costly since it requires resources to produce repressive legislation, to publicize it, to police the obedience and punish offenders (Wintrobe 2000). An illustrative example of this is the civil war that ensued in Algeria in 1991 following the closing of the legislature by the military after the Islamic Salvation Front was poised to win the majority of seats. Conversely, adjusting repression levels based on information obtained from regimes with similar structural characteristics is more straightforward and does not require massive changes in policies or institutions. Further, foreign models of repression can serve as a guideline for new regimes that do not have much experience with repression. Newly minted autocrats, that entered office irregularly need, to adjust their repressive tactics to stem challenges and build up a base of power that allows them to survive in office. In these cases, previous experiences with repression might not available or they could be irrelevant for the new structural challenges the regime is facing. Then, foreign models of repression serve as a heuristic from which “fresh” autocrats can learn on how to stem challenges to their rule.

For example, Syria, while geographically distant from Libya, but sharing a history of divided societies with a minority ruling coalition (Bank & Edel, 2015), paid close attention to

Gaddafi's tactics. The Syrian regime feared a similar fate to the Libyan regime since their political and institutional environment was very similar. More precisely, the Syrian regime wanted to avoid a Benghazi like scenarios from materializing on their territory. To this end, the Syrian army responded swiftly and disproportionate when a significant force of military defectors tried to defend residents of the small city called Rastan, not far from the Lebanese border. The rationale behind this was to prevent this group of defectors from consolidating their independence and lead to international intervention (Heydemann & Leenders, 2014). Similarly, the monarchies of the Gulf region engaged in extensive collaboration, exchange of information and resources to repress any mobilization against their regimes because they feared that the fall of a monarchy would lead to a domino effect (Yom, 2016). As a result, the hypothesis regarding the diffusion of repression between institutionally similar regimes follows:

Hypothesis 1: Autocracies' level of repression is positively influence by levels of repression from institutionally similar regimes.

The main objective of institutional cooptation is to move contentious behaviour from the streets within institutions. These provide a more controlled bargaining space between the dictator, elites and the groups they represent (Gandhi, 2008; Svobik, 2012). Because conflict is an inherent feature of authoritarian politics (Fjelde, 2010; Hegre et al., 2001), autocrats need to be well prepared to deal with outward dissent. Shared autocratic experience with dissent leads to the diffusion of repression between regimes.

Autocracies experiencing dissent share similar policy objectives: defeat the insurgency and survive in office. This increases the sharing of information, skills and resource on how to deal with dissent. Furthermore, manifestations of dissent change the perceived benefits of repression and cooptation because their pre-dissent combination was not successful in preventing dissent. The challenge for these regimes is to figure out what levels of repression

can destroy dissent, while ensuring regime survival. Increases in repression can antagonize regime supporters, radicalize moderates and increase participation in dissent against the regimes. For example, Venezuela's increased violence against the students protesting the Maduro regime increased participation in protests from all sectors of society (Popovic & Joksic, 2014).

In the case of outward dissent, the regime faces a more dynamic environment in which it needs to make decisions quickly and adjust repression levels to defeat the dissidents. Furthermore, if the regime has not experienced dissent before, then previous experiences of repression cannot help the regime adjust its current levels. Then, information obtained from regimes that face similar levels of dissent is very useful in its decision on how to use repression. Institutional concessions are more static and they work in times of relative peace, but are no longer efficient during times of upheaval (Maves & Braithwaite, 2013). For example, when the protests erupted in Egypt during the Arab Spring, Hosni Mubarak vowed to stand down at the next elections, but he would stay in power until then to oversee a stable transition. The problem with these political concessions is that they require time to be implemented, while repression is a more instant response. Furthermore, protesters are unwilling to award any more time to autocrats once they've taken their grievances into the streets. Then, autocracies scout their external environment for models of repression that could provide them with information regarding on how to deal with dissent more efficiently. Regimes that face similar dissent provide this type of information which leads the observing regime to adjust its use of repression based on the experience of its peers. Then, it follows that:

Hypothesis 2: Autocracies' level of repression is positively influenced by levels of repression from regimes that experience similar dissent.

4.6 Research design

The mechanisms (e.g. emulation and learning) set out in the theoretical section are difficult to model empirically as they would require access to empirical sources unavailable to outsiders of the internal decision making process of authoritarian regimes. Snyder (1984: 94-99) argues that shortage of empirical sources can be circumvented by a theory-driven, comparative approach that can identify covariation of decision-making inputs and outputs. Then, I use a time-series cross-sectional research design with time coverage between 1951 and 2008 to test the hypotheses. The analysis focuses on a global sample of 102 authoritarian regimes with country-year as unit of analysis. Authoritarian regimes are defined as a set of informal and formal rules that determine the interests that are represented in the authoritarian leadership group and whether these constrain the dictator. These interests influence the dictator's policy choices, responses to opposition challenges, how well it deals with challenges and how it collapses (Geddes, Wright and Frantz 2014).

4.6.1 *Dependent variable*

Repression levels of authoritarian regimes are measured using data from the Varieties of Democracies project (V-Dem) (Coppedge et al. 2016). In this context, repression is understood as violations of physical integrity rights by the government (i.e. political killings and torture). Torture is conceptualized as the purposeful infliction of extreme physical or mental pain, with the aim to extract information or intimidate victims, who are in a state of incarceration. Political killings are killings by state agents without due process of law with the purpose of eliminating political opponents and as a result of deliberate use of force. Both variables from V-Dem measure the level of respect for these physical integrity rights (torture and political killings) and take the following values:

- (0) Not respected by public authorities. Torture or political killings are practised systematically by the government.
- (1) Weakly respected. Torture and political killings are frequently used. These are not incited by political leaders, but they do not actively oppose them nor try to prevent them.
- (2) Somewhat. Torture and political killings are occasionally practised, but not approved by approved by top leaders.
- (3) Mostly respected by public authorities. Torture and political killings are practised only in a few isolated cases, but are not incited nor approved by top leaders of government.
- (4) Fully respected by authorities. Torture and political killings are non-existing.

The dependent variable is a physical integrity index formed by point estimates from a Bayesian factor analysis model including the two ordinal indicators for torture and political killings²⁸. It ranges between 0 and 1 so that lower values indicate less respect physical integrity rights (more repression) and higher values represent more respect for these rights (less repression). The value of the index has been subtracted from 1 and multiplied by 100 so that higher values of the index correspond to higher levels of repression, and vice versa²⁹. There is a two-fold advantage of using repression data from V-Dem. First, its spatiotemporal coverage is broader compared to the Political Terror Scale or CIRI Human Rights Dataset (Cingranelli and Richards 2010; Wood and Gibney 2010). Second, the data is coded by country experts and an Item Response Theory Bayesian model is used to estimate the value of the latent measure

²⁸ This measure is provided by V-Dem, not calculated by the author.

²⁹ This facilitates the interpretation of the coefficients.

for repression (Coppedge et al. 2016) which circumvents the problem of changing standards of accountability for human rights abuses (Fariss 2014)³⁰.

4.6.2 Independent variable: Repression spatial lags

The paper uses two types of measures in order to capture transnational linkages between autocracies³¹. The linkages between regimes are captured with a connectivity matrix W given by a $NT \times NT$ matrix (with $T N \times N$ sub-matrices along the block diagonal) with the element $w_{i,j}$ capturing the relative connectivity of regime j to regime i . The spatial lag represents a weighted average of all other observations of the lagged dependent variable³² (excluding the country under observation) with each weight specified by $w_{i,j}$. More importantly, using a temporally lagged spatial lag alleviates endogeneity, in turn leading to a more conservative estimate for the coefficient and a more stringent test for hypothesis testing (Franzese and Hays 2007).

Each connectivity matrix is row standardized so that the estimated values of ρ reflect the average influence of other states (excluding the regime under study). Row standardization ensures that the spatial lag has the same metric as the dependent variable and its coefficient is directly interpretable as strength of interdependence (Franzese and Hays 2008; Plümper and Neumayer 2010). The theoretical assumption behind row-standardization is that the effect other regimes have becomes proportionally smaller the higher the number of countries one is influenced or connected with (Plümper and Neumayer 2010). In other words, the observing

³⁰ Fariss' (2014) latent measure of repression is used as an alternative dependent variable. The results reported below remain the same. See the online appendix for the models with Fariss' latent measure of repression.

³¹ These rely on a political economy concept of space and distance as discussed by Beck, Gleditsch, and Beardsley (2006)

³² The decision to use a temporally lagged spatial lag rest on the assumption that regimes require time to feedback the information they observe in their peers and to react accordingly. Also, the spatial lag is temporally lagged to avoid simultaneity issues in the spatial OLS model. The models from the main text of the paper are also estimated with spatial maximum (S-ML) models that do not need a temporally lagged dependent variable. In the S-ML models, the simultaneity bias inherent to spatial models is being addressed directly by the model (Franzese and Hays, 2007).

regime has a limited number of resources that can use to gather information. Then, the ability to gather more information from each regime is reduced by the number of regimes to which the observing regime is connected.

The first linkage between authoritarian regimes is captured by institutional similarity. It relies on the argument that institutions are adopted by autocracies to minimize the conflict potential between different political actors (Gandhi 2008; Svolik 2012; Frantz and Kendall-Taylor 2014). Autocracies with similar institutions share similar underlying structural weakness towards the opposition. This in turn, leads to common membership in an institutional peer groups whose ability to control the opposition and enforce political order is structurally equivalent. The institutional structure of authoritarian regimes is based on the institutional cooptation measure proposed by Frantz and Kendall-Taylor (2014) with data on political institutions from Cheibub, Gandhi, and Vreeland (2010) dataset. The variable measuring the status of the legislature (*closed*) takes a value of 0 if the legislature is closed, 1 if the legislature is appointed and 2 if it is elected. Similarly, the variable measuring the status of political parties (*defacto2*) takes a value of 0 if all political parties are banned, 1 if the regime relies on a single party or a regime united front of parties, and 2 if multiple political parties are allowed to exist outside the regime's influence. From these variables, an institutional co-optation variable is generated which takes a value of 1 if the legislature is closed and political parties are banned, 2 if the legislature is closed and there are one or more political parties or if legislature is open, but political parties are banned, 3 if the legislature is open and there is one political party/regime front, and 4 if the legislature is open and multiple political parties are allowed to exist. Finally, states in a dyad receive a value of 1 if they have the same institutional or cooptation level, and are considered to be institutional peers. Otherwise, the dyad receives a score of 0 and the two countries are not considered institutional peers.

The second linkage between authoritarian regimes is captured via experience with outward dissent. It is defined as a contested incompatibility over government and/or territory where the use of armed forces between two parties, of which at least one is the government, resulted in more than 25 battle related deaths for that calendar year (Gleditsch et al. 2002). The variable capturing the type of civil conflict receives a value of 1 if the armed incompatibility is over government, 2 if it is over territory and 3 if a regime faces both types of armed incompatibilities. States in a dyad receive a score of 1 if they experience same type of armed incompatibility and are considered experiential peers, and 0 otherwise.

4.6.3 Model estimation

The hypotheses are tested with the use of spatial temporal autoregressive models or “spatial lag models” (Franzese and Hays 2007; 2008). Estimating the effect of spatial dependence or policy diffusion can be challenging because there is a feed-back loop in which the observed policy (i.e. repression) is an output for the observed unit, but an input for other units that influence directly the output of the observed unit. More simply, there is a simultaneity problem that needs to be addressed directly by the estimation model. Under certain assumptions, the use of a temporally lagged spatial lag in a spatial ordinary least squares model (S-OLS) circumvents this problem³³ (Ward and Gleditsch 2008). Then, the proposed causal mechanism of the spatial dependence of repression is tested with an S-OLS model that takes the following form:

$$y_t = \phi y_{t-1} + \beta X_t + \rho W y_{t-1} + \varepsilon,$$

³³ The models from the main text of the paper are also estimated with the use of spatial maximum likelihood models (S-ML) that address the problem of simultaneity head on (Franzese and Hays 2007; 2008). The core findings are robust to this type of model. Moreover, the temporal lag of the spatial lag is based on the intuition that regimes require time to collect the information about repression and to process it.

where y_t is the dependent variable, y_{t-1} is the temporally lagged variable, X_t are the set of control variables and the constant, ε is the error term, and $W y_{t-1}$ is the spatial lag with the spatial coefficient ρ capturing the strength of interdependence through the connectivity matrix. Furthermore, in order to rule out the possibility that increases in repression are due to spatial clustering, the model includes a set of control variables that capture exogenous-external conditions (or common shocks) and spatially correlated unit factors (Franzese and Hays 2007; 2008). The temporally lagged dependent variable aims to account for temporal dependence in the data, while the country fixed effects account for path dependence and cross-sectional heterogeneity. Similarly, year fixed effects account for temporal shocks common to all states in a given year (e.g. collapse of the Soviet Union in 1991) (Ward and Cao 2012). Furthermore, the role of these methodological fixes and the inclusion of a set of theoretically informed control variables ensure that the diffusion effect we observe is not due to clustering of state characteristics (Buhaug and Gleditsch 2008).

4.6.4 Control variables

There are two challenges when estimating spatial models. First, the so-called “Galton’s problem” requires us to correctly specify the model so that we are able to distinguish between the variation explained by unit interdependence (“spatial lag”) and by domestic, exogenous-external, and/or context-conditional factors (Franzese and Hays 2008). Failure to properly estimate these effects would lead to either over estimating the importance of common shocks and domestic factors/context factors; or, it leads to overestimating the importance of interdependence at the expense of common shocks. Second, there is “reverse Galton’s problem” as the observed spatial clustering of repression are “*due to a corresponding distribution of relevant state characteristics... that may be both spatially clustered and potentially related*” to repression (Buhaug and Gleditsch 2008: 216). More simply, it means that we need to account

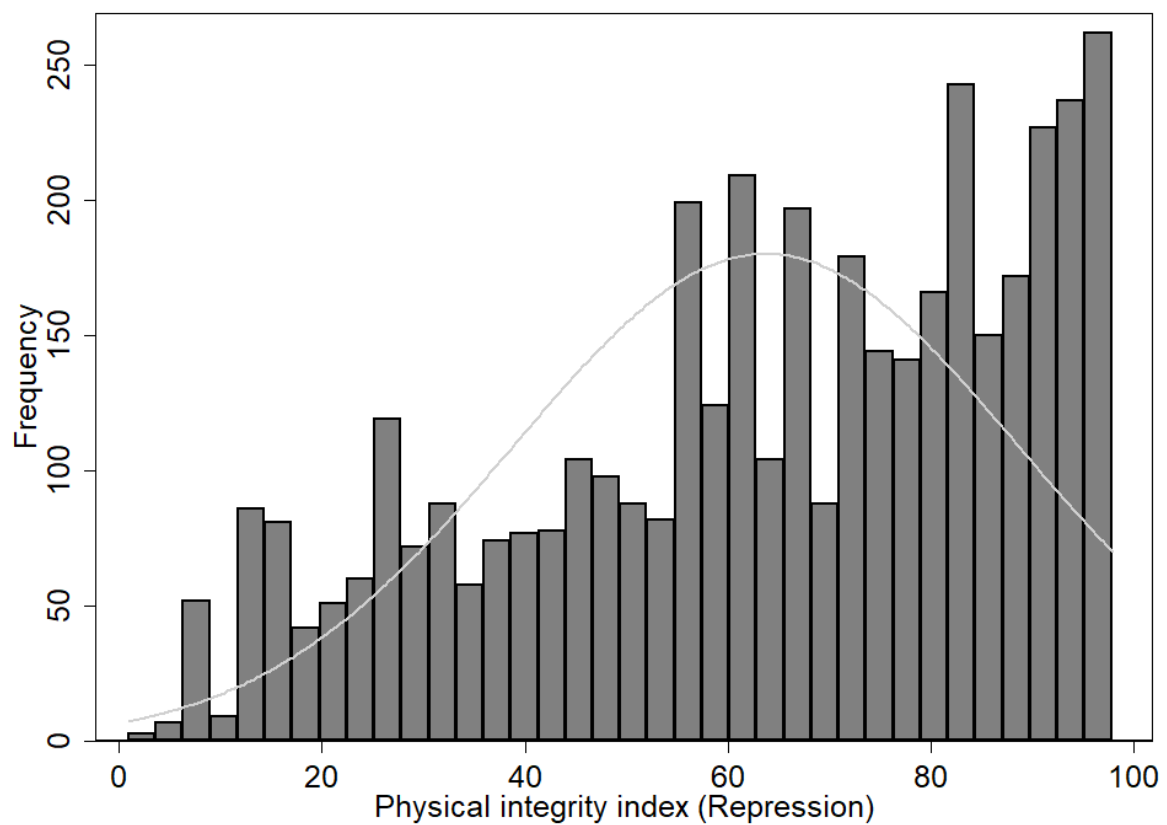
for unit specific characteristics that explain variation in repression, besides the fixes that eliminate temporal and spatial dynamics, and unit heterogeneity. The control variables discussed below have been found to influence the level of repression a state uses against its citizens.

Population size from Gleditsch (2002) is included as more populous have been found to be more repressive because of their higher potential for collective mobilization (Mitchell and McCormick 1988). The size of GDP/capita is accounted for because poorer countries will tend to use repression as an alternative to the provision of public goods (Bueno de Mesquita et al. 2003)³⁴. The model includes a binary variable to account for the incidence of civil conflict in a country-year (Gleditsch et al. 2002) to account for the possibility that increased levels of repression are due to dissent (Hill and Jones 2014) Furthermore, a variable capturing the percentage of countries experiencing a civil war within 950 km of the regime under observation is included to account for the possibility that regime repress pre-emptively to avoid the conflict spilling over (Buhaug and Gleditsch 2008; Danneman and Ritter 2014). Next, the co-optation level of the regime is included because more institutionalized regimes are better equipped to use repression discriminately (Frantz and Kendall-Taylor 2014). Finally, a dummy variable is included to account for the effect of the Cold War on the ability of countries to get training and resources as a part of the proxy war between the US and Soviet Union.

³⁴ GDP/per capita is measured in real 1996 dollars, and both GDP/capita and population size were logged due to their skewed distribution. Then, their unit averages were included in the model because modelling these slow moving variables at state-year level might induce substantial collinearity (Danneman and Ritter, 2014).

Table 4.1 Descriptive statistics

VARIABLES	(1) N	(2) Mean	(3) Std. dev	(4) Min	(5) Max
W _y ^{institutional similarity}	4,171	64.14	16.42	0	97.87
W _y ^{experiential similarity}	4,171	11.95	26.12	0	97.85
Lagged physical integrity index	4,171	64.14	24.63	0.945	97.87
Co-optation	3,977	3.139	0.958	1	4
Log GDP/capita _{unit}	4,171	7.749	0.921	6.010	10.84
Log population size _{unit}	4,171	9.132	1.332	6.654	13.72
Incidence of conflict	4,171	0.291	0.670	0	3
Share of conflict in neighboring countries	4,056	0.191	0.289	0	1
Cold War	4,171	0.686	0.464	0	1
Repression	4,171	63.72	24.86	0.945	97.87

Figure 4.1 Distribution of repression

4.7 Empirical analysis

Table 4.1 summarizes the spatial ordinary least squares (S-OLS) models used to test the theoretical expectations regarding diffusion of repression between authoritarian regimes. Model 1 and 2 include each of the spatial lags for institutional and experiential peer groups, while model 3 includes both spatial lags. The coefficients of the spatial lags can be interpreted directly for S-OLS models because of the continuous measurement of the dependent variable. However, there are several caveats to the interpretation of these spatial models. First, the introduction of the lagged dependent variable in the model determines the effect estimates to reflect only the short-term effects (the effect of the control variables or spatial lag in the current year) (Ward and Gleditsch 2008). The long-term effects of the spatial lag were estimated using the formula of the coefficient of the temporally lagged dependent variable proposed by Plümper, Troeger, and Manow (2005: 336):

$$\sum_{t=1}^T (\rho \sum_{j=1}^T w_{ij} y_{jt-1}) \beta_0^{T-t}$$

where β_0 is the coefficient of the lagged dependent variable, T is the number of periods with t denoting one time period, and i and j representing the units (authoritarian regimes in a dyad). Both the short and long-term effects of the spatial lag are summarized in the Figure 1 and Table 2, and discussed in more detail below. Second, the interpretation of the coefficients in a model with spatiotemporal interdependence is a bit more complex because the coefficients of the control variables represent only the pre-dynamic impulses from those variables to the outcome (Ward and Gleditsch 2008; Hays, Kachi and Franzese 2010). In other words, the coefficients

of the control variables indicate how these affect the outcome for one unit, but do not provide any indication of how it affects the actual diffusion between units³⁵.

The discussion of the results starts with interpreting the coefficients of the control variables which are consistent and robust across the models from Table 4.2. First, the coefficient of the lagged dependent variable indicates that previous reliance on repression increase the likelihood of regimes using repression in the future. This finding confirms previous arguments that once momentum gather around repressive policies, it is hard to disrupt them and government agencies seek to perpetuate this behavior to legitimize and motivate their existence (Davis and Ward 1990; Davenport 2007b). Second, the incidence of civil war indicates higher levels of state repression as states react by force to outward dissent against the regime. Moreover, conflict in neighboring countries does not seem to increase domestic levels of repression, showing that autocrats do not repress pre-emptively to avoid spillovers. This finding is contrary to the findings of Danneman and Ritter (2014)³⁶, yet it could be explained by the fact that autocrats are more concerned about the challenges from within their ruling coalition than of popular protests (Svolik 2012). Contrary to the findings of Frantz and Kendall-Taylor (2014), the coefficient of cooptation indicates that cooptation reduces significantly the use of state repression³⁷. Finally, the coefficient for population size is positive and statistically significant size while the coefficient GDP/capita is negative and statistically significant which is in harmony with previous findings (Mitchell and McCormick 1988).

³⁵ We would need to calculate the spatiotemporal multipliers to make inferences about the effect of the covariates on the diffusion of repression. These spatiotemporal multipliers are not estimated given the focus of the paper on the effect of the spatial lags on domestic levels of repression.

³⁶ The online appendix I estimate models that use the physical integrity index from CIRI (similar to Danneman and Ritter 2014) and the spatial lag of neighbouring conflict become statistically significant. However, this relies on the overly strong assumption that the index is continuous. Moreover, all the results reported in Table 1 remain identical, except for the spatial lag of neighbouring conflict.

³⁷ A caveat to this finding is that the estimation sample and measurement of repression differs between this paper and the one of Frantz and Kendall-Taylor (2014). Preliminary replications (not reported) indicate that the different sign of co-optation comes from the use of country and year fixed effects.

The positive and statistical significant ρ coefficient ($W_y^{\text{institutional similarity}}$) of the spatial lag from Model 1 indicates that repression diffuses between regimes with similar institutions. This finding offers support to the argument that autocracies learn and emulate from regimes with

Table 4.2 Diffusion of repression within authoritarian institutional and experiential peer groups, 1951-2008.

VARIABLES	(Model 1) Institutional peer group	(Model 2) Experiential peer group	(Model 3) Both peer groups
$W_y^{\text{institutional similarity}}: \rho$	0.0276** (0.0120)	--	0.0276** (0.0120)
$W_y^{\text{experiential similarity}}: \rho$	--	-0.00130 (0.00382)	-0.00124 (0.00382)
Lagged physical integrity index	0.901*** (0.00754)	0.903*** (0.00751)	0.901*** (0.00754)
Co-optation	-1.432*** (0.142)	-1.439*** (0.142)	-1.433*** (0.142)
Log GDP/capita _{unit}	-1.506*** (0.513)	-1.727*** (0.506)	-1.518*** (0.514)
Log population size _{unit}	0.199 (0.462)	0.317 (0.459)	0.195 (0.462)
Incidence of conflict	0.922*** (0.224)	0.918*** (0.224)	0.921*** (0.224)
Share of conflict in neighboring countries	0.215 (0.597)	0.246 (0.597)	0.216 (0.597)
Cold War	1.336 (1.270)	1.311 (1.271)	1.337 (1.270)
Constant	19.31** (7.543)	21.83*** (7.498)	19.49** (7.563)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.947	0.947	0.947

Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

similar structural characteristics. Contrary to the theoretical expectations, the ρ coefficient ($W_y^{\text{experiential similarity}}$) of the spatial lag from Model 2 is negative, but statistically insignificant and indicates that repressive methods do not diffuse between authoritarian regimes that face

similar dissent³⁸. When including both spatial lags in the S-OLS model (Table 4.2, Model 3) we can observe that the coefficient of the spatial lag for institutionally similar regimes stays positive and statistically significant, while the coefficient of the spatial lag for experiential similarity remains statistically insignificant.

The statistically insignificant effect of the spatial lag for experiential similarity should be understood with reference to previous literature on whether positive or negative experiences influence more the learning process. The literature has not yet reached a consensus whether success or failure is more relevant for the formation of learning peer groups (Bennett 1991; Gilardi 2012; Simmons, Dobbin and Garrett 2007; Gilardi 2016). In the current setting, the incidence of civil war could be an indication of a failure of the regime to prevent outward challenges through co-optation. However, it could also be that leaders are not necessarily troubled by a civil war as they are more concerned about potential challenges from within their ruling coalition (Svolik 2012). Then, while regimes might be connected through this shared experience of having to face a rebellion, it could be that the null effect of this spatial lag is determined either by conflicting information from the observed country (evolution of conflict) or that simply regimes have difficulties parsing out relevant information from background noise.

The short and long term effects of the spatial lags from Models 1-3 from Table 4.3 were calculated using the equation from Plümper, Troeger, and Manow (2005) and are summarized in Figure 4.2 below³⁹. The short-term estimate of $W_y^{\text{institutions}}$ from Model 1 has a statistically

³⁸ This null finding holds regardless of the model specification or connectivity matrix specification: violent vs non-violent dissent, minor vs major civil conflict, shared history of coup attempts or shared history of irregular leader exit from office. These null findings are not reported in the paper nor the appendix since the purpose of the paper is not to find a statistically significant p-value, but rather to contrast two plausible diffusion peer groups for repression.

³⁹ The horizontal bars are 95 percent confidence intervals and the vertical dashed line represents a spatial effect of 0. Estimates are based on models in Table 1.

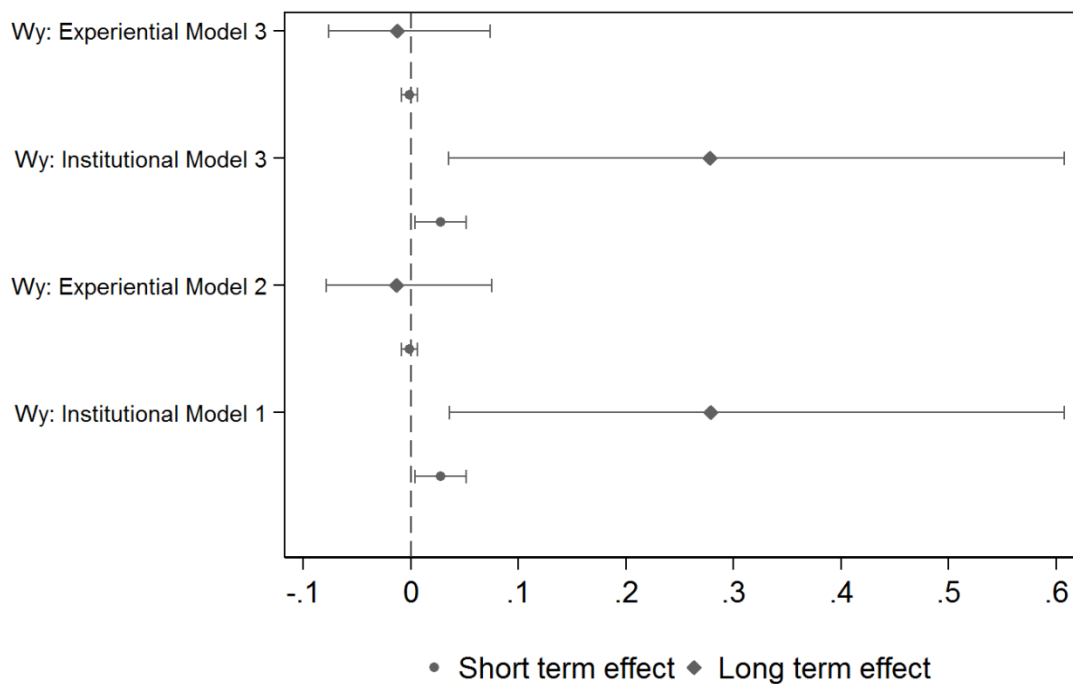
significant value of 0.027 while the asymptotic long term effect of the same spatial lag has a statistically significant value of 0.27. Conversely, the short term estimate of the experiential spatial lag from Model 2 has a statistically insignificant value of -0.001 and asymptotic long term effect of -0.01. Finally, the short term effect of the institutional spatial lag from Model 3 has a statistically significant value of 0.027 and an asymptotic long term of 0.27. Also, the short and long term effects of the experiential spatial lag from Model 3 are statistically insignificant. All the values of the short term and asymptotic long term effects are summarized in Table 4.3.

Table 4.3 Short-term and Asymptotic Long-term effects of Spatial Lag Variables (Models 1-3)

		Estimate	Lower CI	Upper CI	
$W_y^{\text{Institutional}}$	Model 1	0.0276078	0.004045	0.051171	Short term
		0.2788723	0.035548	0.607675	Long term
$W_y^{\text{Experiential}}$	Model 2	-0.001304	-0.00879	0.006183	Short term
		-0.013403	-0.07849	0.074903	Long term
$W_y^{\text{Institutional}}$	Model 3	0.0275809	0.004015	0.051147	Short term
		0.2785657	0.035277	0.60732	Long term
$W_y^{\text{Experiential}}$	Model 3	-0.001243	-0.00873	0.006239	Short term
		-0.012558	-0.07667	0.074078	Long term

Note: confidence intervals (CI) pertain to the lower and upper bound of 95 percent confidence interval.

Figure 4.2 Short-Term and Asymptotic Long-Term Spatial Effects of Spatial-Lag Variables



Several robustness checks were performed to rule out alternative explanations for the diffusion effect we observe between institutionally similar regimes⁴⁰. First, the models were re-estimated with Fariss' (2014) latent measure of human right violations as dependent variable. The results reported in the main text of the paper remain identical with this alternative dependent variable. Second, previous research shows that geographic proximity captures diffusion effects, but the reasons why we observe diffusion over geographic space are not clearly determined (Baybeck, Berry, and Siegel 2011), are sometimes misleading and outdated (Shipan and Volden, 2012), and not comprehensive enough (Desmarais, Harden, and Boehmke 2015). Two repression spatial lags were included in the models to account for potential

⁴⁰ A more extended discussion of the robustness checks and the estimation results can be found in the online appendix.

unobserved spatial heterogeneity and/or spatial clustering of state characteristics. For this, the first connectivity measure captures whether two countries are geographic neighbours based on the 950 km limit proposed by Gleditsch and Ward (2001), while the second connectivity is based on an inversed distance because “*near things are more related than distant things*” (Tobler 1970: 236). The inclusion of these two different geographic spatial lags does not change anything in the reported results.

Third, it is possible that the diffusion effect between institutionally similar regimes is explained by the fact that the observed autocracy experiences dissent while the observing one does not. Then, despite institutionally similar, the observing regimes might react to conflict in institutionally similar regimes, not to their use of repression. To rule out this alternative explanation, I re-estimate a model in which I include a spatial lag that captures the proportion of institutionally similar regimes that experience a civil war. This new model specification does not affect the results reported in the paper. Fourth, several spatial lags that capture proportion of irregular leader exit via coup or non-violent campaign and proportion of coup attempts in the neighbouring countries are included to account for a pre-emptive repression (Danneman and Ritter 2014) or for a potential diffusion of dissent tactics by the opposition. Again, the inclusion of these variables does not affect the main findings. Fourth, a spatial lag measuring the average level of democracy in the geographic neighbourhood is included to account for a potential diffusion effect of institutional features (Gleditsch and Ward 2006). Next, variables capturing whether autocracies are allied with the US and/or Soviet Union/Russia, and the level of foreign aid/capita they receive were included to account for any international mechanisms that could undermine or enhance their repressive efforts or the international costs associated with it. Neither of these variables affects the reported results.

4.8 Conclusion

Recent methodological advances in spatial econometrics allows us to test more systematically mechanisms of policy diffusion between nations (Franzese and Hays 2007; 2008; Hays, Kachi and Franzese 2010; Simmons, Dobbin and Garrett 2007; Elkins and Simmons 2005). This article provided a theoretical account and empirical evidence that repression diffuses between authoritarian regimes through learning and emulation.

Current models of state repression greatly emphasize how repression is the result of domestic processes and factors while ignoring its spatial context and transnational linkages between authoritarian regimes (Davenport 2007b; Carey 2010; Abouharb and Cingranelli 2007; Nordås and Davenport 2013; Sullivan 2016; Hill and Jones 2014; Rivera 2016). The paper filled this gap by providing a theoretical explanation and empirical evidence that domestic factors create transnational linkages between authoritarian regime, and how in turn, these influences autocrats' use of repression. The argument put forth is that authoritarian regimes update their knowledge and learn from other regimes how to use repression in order to enforce political order and survive in office. Autocrats seek to update their information and learn about repression from other regimes because repression is politically and socially costly, and its effect on dissent is highly uncertain (Davenport 2007b). Hence, autocrats need to obtain relevant information about the level of repression and its effect on dissent in order to enforce political order efficiently and survive in office. Since leaders cannot observe every authoritarian regime existent in the world, they rely on heuristics to parse out relevant from irrelevant information. Then, they look at regime with similar structural characteristics (i.e. institutional peer-group) and at regimes with similar dissent (i.e. experiential peer group). Due to their shared structural and experiential similarities, regimes believe that the information they obtain from peer groups is indicative of how they should deal with the opposition.

The results suggest that repression is not only a product of domestic processes, but rather there is also a strong diffusion effect between institutionally similar regimes. More specifically, levels of repression in institutionally similar regimes positively influence each other. However, despite recent research indicating that civil wars are the most contagious type of event cross-nationally (Miller, Joseph, and Ohl 2016), the results of this paper indicate that the use of repression to defeat an insurgency is not influenced by repression levels of autocracies facing similar dissent.

This paper brings several contributions to the literature on state repression, and to the one on conflict processes more general. First, it shows autocrats' strategies of dealing with the opposition are not only determined by domestic processes, but rather their own structural characteristics create an interdependence that influences their use of repression. Second, with respect to diffusion process in conflict research, the result show that besides conflict, governments' strategies on how to solve it permeate national boundaries and diffuse between regimes. Finally, this study is the first one to systematically test and demonstrate in cross-national framework the diffusion of repression between authoritarian regimes (Lynch 2014).

Despite bringing these important contributions to the literature, the study still leaves out a few important questions that should be answered. First, geography is considered to be an a-theoretical concept, but there is some evidence that it geography matters when studying conflict processes (Fearon and Laitin 2003). Then, future research could look into how geographical factors exacerbate or attenuate the diffusion of repression between regimes. Second, authoritarian regimes do not use only violent repression against their citizens, but they also violate their civil and political rights (Frantz and Kendall-Taylor 2014). From this follows that we should extent our scope and understand also how violations of civil and political rights diffuse between regimes. Finally, we still lack an understanding into how positive or negative

experiences of an outcome influence its adoption by others. Future studies should definitely do more into finding proxies for these negative and positive experiences and test out the diffusion processes involving these.

4.9 Appendices

The online appendix discusses several alternative explanations for the theoretical mechanisms proposed and test the robustness of the findings from the main text of the paper.

The first robustness check uses an alternative measurement for state repression. The dependent variable was culled from the Varieties of Democracy because of its extended spatial and temporal coverage, and its stringent criteria for data collection and measurement (for an extended discussion see Coppedge et al. 2016). Similarly, Fariss (2014) proposes a latent measurement for violations of human rights that accounts for changing standards of accountability in human rights monitoring and provides a more consistent way of measuring state repression. The focus of this measure is on violations of physical integrity rights (torture, extrajudicial killings, political imprisonment, disappearances, etc.). The new dependent variable takes values between -3.11 and 2.34. Negative values represent higher levels of repression while positive values represent lower levels of repression. However, in the context of spatial models a positive coefficient of the spatial lag (with the alternative dependent variable) is indicative that the level of repression (or respect for human rights) diffuses between regimes that are institutionally or experientially similar. Models A1-A3 from Table 4.1 from Appendix summarize the results. In Model A1 we can observe that the ρ coefficient ($W_y^{\text{institutional similarity}}$) is positive and statistically significant at conventional levels, while the ρ coefficient from Model A2 ($W_y^{\text{experiential similarity}}$) is positive, but not statistically significant. Finally, in Model A3 we can observe that the ρ coefficient for institutional similarity ($W_y^{\text{institutional similarity}}$) is still positive and significant at a higher level, while the ρ coefficient ($W_y^{\text{experiential similarity}}$) is negative and statistically insignificant. Practically, the results reported

in the main paper hold. Furthermore, all other control variables have the same effect on the dependent variable⁴¹.

Appendix 4.1 Diffusion of repression within authoritarian institutional and experiential peer groups, Latent measure of repression Fariss (2014), 1951-2008.

VARIABLES	(Model A1) Fariss Latent Repression	(Model A2) Fariss Latent Repression	(Model A3) Fariss Latent Repression
$W_y^{\text{institutional similarity}}: \rho$	0.0203*** (0.00769)	--	0.0203*** (0.00771)
$W_y^{\text{experiential similarity}}: \rho$	--	0.000768 (0.00745)	-0.000650 (0.00746)
Lagged physical integrity index	0.948*** (0.00480)	0.950*** (0.00475)	0.948*** (0.00480)
Co-optation	0.0166*** (0.00355)	0.0165*** (0.00355)	0.0166*** (0.00355)
Log GDP/capita _{unit}	0.105*** (0.0208)	0.0487*** (0.0125)	0.105*** (0.0209)
Log population size _{unit}	-0.00268 (0.00701)	0.00310 (0.0116)	-0.00264 (0.00703)
Incidence of conflict	-0.0395*** (0.00579)	-0.0386*** (0.00579)	-0.0395*** (0.00579)
Share of conflict in neighboring countries	-0.00765 (0.0153)	-0.00923 (0.0153)	-0.00766 (0.0153)
Cold War	-0.0122 (0.0319)	-0.0118 (0.0319)	-0.0122 (0.0319)
Constant	-0.843*** (0.198)	-0.554*** (0.189)	-0.845*** (0.199)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.976	0.976	0.976

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Buhaug and Gleditsch (2008) propose the so-called “reverse Galton’s problem” that leads to spatial clustering of repressive countries due to shared characteristics. In other words, it could be possible that repressive countries cluster together due to some unobserved

⁴¹ The signs are flipped because for this dependent variable positive values represent more respect for human rights (less repression), and vice versa. More importantly, the positive sign of the ρ means the same as it capture the direction of interdependence.

characteristics and this facilitate the diffusion of repression. To account for such a situation, models A4-A6 from Table 4.2 from Appendix account for the level of repression in neighbouring countries (950 km or less apart from each other) (Danneman and Ritter 2014; Gleditsch and Ward 2001). The results indicate that there is a strong diffusion effect between neighbouring countries as it is easier for autocracies to emulate and learn from geographically close regimes (e.g. operation Condor). More importantly, the ρ coefficient for the institutional peer groups remains positive and statistically significant which further reinforces the argument that institutionally similar regimes cooperate, learn and emulate each other regardless of geographic distance. While the 950 km limit is commonly accepted in the literature, this threshold can be considered arbitrary as there is no theoretical reasons for why countries that are 950 km away from each other are considered neighbors while countries 951 km apart are not. The models from Table 4.3 from Appendix accounts for this, and include a spatial lag of repression based on the inverse distance between countries so that it does not impose any artificial threshold for neighbors. Models A7-A9 show that when using inverse distance as connectivity, the results reported in the main text of the paper are identical. This is an indication of the arbitrary nature of the 950 km mark.

Appendix 4.2 Diffusion of repression within authoritarian institutional, experiential and geographic peer groups, 1951-2008.

VARIABLES	(Model A4)	(Model A5)	(Model A6)
$W_y^{\text{institutional similarity}}: \rho$	0.0225* (0.0119)	--	0.0224* (0.0119)
$W_y^{\text{experiential similarity}}: \rho$	--	-0.00146 (0.00378)	-0.00141 (0.00377)
$W_y^{\text{geographic neighbour}}: \rho$	0.0798*** (0.00870)	0.0806*** (0.00869)	0.0798*** (0.00870)
Lagged physical integrity index	0.866*** (0.00840)	0.867*** (0.00838)	0.866*** (0.00840)
Co-optation	-1.422*** (0.140)	-1.428*** (0.140)	-1.423*** (0.140)
Log GDP/capita _{unit}	-1.265** (0.508)	-1.446*** (0.502)	-1.279** (0.509)
Log population size _{unit}	0.00784 (0.457)	0.100 (0.455)	0.00343 (0.457)
Incidence of conflict	1.010*** (0.222)	1.008*** (0.222)	1.009*** (0.222)
Share of conflict in neighbouring countries	-0.527 (0.596)	-0.509 (0.596)	-0.526 (0.596)
Cold War	1.211 (1.256)	1.190 (1.256)	1.212 (1.256)
Constant	16.53** (7.466)	18.60** (7.421)	16.73** (7.485)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.948	0.948	0.948

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Appendix 4.3 Diffusion of repression within authoritarian institutional and experiential peers and inverse distance geographic repression, 1951-2008.

VARIABLES	(Model A7)	(Model A8)	(Model A9)
$W_y^{\text{institutional similarity}}: \rho$	0.0259** (0.0120)	--	0.0259** (0.0120)
$W_y^{\text{experiential similarity}}: \rho$	--	-0.00133 (0.00382)	-0.00127 (0.00381)
$W_y^{\text{inverse distance}}: \rho$	0.0540** (0.0248)	0.0575** (0.0248)	0.0540** (0.0248)
Lagged physical integrity index	0.901*** (0.00754)	0.903*** (0.00751)	0.901*** (0.00754)
Co-optation	-1.447*** (0.142)	-1.455*** (0.142)	-1.449*** (0.142)
Log GDP/capita _{unit}	-1.259** (0.525)	-1.451*** (0.520)	-1.271** (0.526)
Log population size _{unit}	0.240 (0.462)	0.353 (0.459)	0.236 (0.462)
Incidence of conflict	0.920*** (0.224)	0.916*** (0.224)	0.919*** (0.224)
Share of conflict in neighbouring countries	0.0621 (0.601)	0.0817 (0.601)	0.0632 (0.601)
Cold War	1.385 (1.269)	1.366 (1.270)	1.387 (1.270)
Constant	13.88* (7.943)	15.89** (7.919)	14.05* (7.961)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.947	0.947	0.947

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

An alternative explanation on why repression diffuses between institutionally similar regimes would be that diffusion is not determined by similar structural weaknesses, but rather by active dissent that those regimes are experiencing. In other words, it is possible that an autocracy does not yet experience dissent (e.g. Syria during the civil war in Libya in 2011), yet it observes the occurrence of conflict in a similar regime (Libya 2011) and looks to avoid its fate (e.g. Benghazi scenario, international intervention, etc.) (Heydemann and Leenders 2014). To account for this, models A10-A12 have a variable that captures the share of conflict in

institutionally similar regimes (incidence of civil conflict). The results indicate that conflict in institutionally similar regimes does not diffuse between these regimes, while repression levels do as indicated by the main results of the paper. Furthermore, an alternative to this would be that successful dissent that ousted the leader from office either via a coup or successful social campaign would determine autocracies to increase repression in order to avoid a similar fate. Then, Model A13 from Table 5.5 from Appendix includes two spatial lags capturing the share of successful coups in neighbouring countries and one spatial lag capturing the share of successful social campaigns (Chenoweth and Lewis 2013; Powell and Thyne 2011). Contrary to expectations, successful coups in geographic neighbourhood seems to have a negative effect on autocracies' domestic levels of repression while successful campaigns do not exert a statistically significant effect. More importantly, the results of the main paper remain identical. Moreover, Bell and Powell (2016) argue that coup attempts in neighbouring countries increases domestic levels of repression. Model A14 accounts for this by including a spatial lag capturing the share of coup attempts in neighbouring countries. While its coefficient it's positive, it is not statistically significant.

Appendix 4.4 Diffusion of repression between institutionally similar regimes with similar levels of conflict, 1951-2008.

VARIABLES	(Model A10)	(Model A11)	(Model A12)
$W_y^{\text{institutional similarity}; \rho}$	0.0269** (0.0121)	--	0.0268** (0.0121)
$W_y^{\text{experiential similarity}; \rho}$	--	-0.00136 (0.00382)	-0.00128 (0.00382)
Share of conflict in institutionally similar regimes	0.403 (0.799)	0.621 (0.794)	0.408 (0.799)
Lagged physical integrity index	0.901*** (0.00755)	0.903*** (0.00751)	0.901*** (0.00755)
Co-optation	-1.433*** (0.142)	-1.440*** (0.142)	-1.435*** (0.142)
Log GDP/capita _{unit}	-0.617 (0.434)	-2.920*** (0.843)	-0.615 (0.434)
Log population size _{unit}	0.715* (0.391)	-0.174 (0.278)	0.720* (0.391)
Incidence of conflict	0.921*** (0.224)	0.916*** (0.224)	0.920*** (0.224)
Share of conflict in neighboring countries	0.186 (0.600)	0.201 (0.600)	0.187 (0.600)
Cold War	1.332 (1.270)	1.307 (1.271)	1.334 (1.270)
Constant	5.968 (5.618)	33.09*** (8.280)	5.927 (5.620)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.947	0.947	0.947

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Appendix 5.5. Coups attempts, leader exit via coups and social campaigns in neighboring countries and diffusion of repression, 1951-2008.

VARIABLES	(Model A13)	(Model A14)
$W_y^{\text{institutional similarity}; \rho}$	0.0277** (0.0120)	0.0270** (0.0120)
Share of successful coups in neighbors	-2.613* (1.383)	--
Share of successful social campaigns in neighbors	-0.995 (2.572)	--
Share of attempted coups in neighbors	--	2.101 (1.402)
Lagged physical integrity index	0.901*** (0.00754)	0.901*** (0.00754)
Co-optation	-1.463*** (0.143)	-1.429*** (0.142)
Log GDP/capita _{unit}	-1.479*** (0.513)	-1.504*** (0.513)
Log population size _{unit}	0.233 (0.462)	0.205 (0.462)
Incidence of conflict	0.912*** (0.224)	0.924*** (0.224)
Share of conflict in neighboring countries	0.339 (0.604)	0.187 (0.597)
Cold War	1.275 (1.270)	1.285 (1.270)
Constant	18.98** (7.545)	19.28** (7.542)
Observations	3,863	3,863
Country and Year Fixed Effects	Yes	Yes
R-squared	0.947	0.947

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Models A14-16 from Table 4.6 from Appendix account for the average level of democracy of an autocracies' neighbouring countries. This calculated based on the electoral democracy index from the V-Dem dataset (see Coppedge et al. 2016 for more details on its conceptualization). It ranges between 0 (full autocracy) and 1 (full democracy). This spatial lag was included in the baseline model to account for the pressures that democratic neighbours could make on autocracies to improve their human rights practices (e.g. the reaction of EU

members during the 2014 Maidan protests in Ukraine). A higher level of neighbouring democracies reduces a regime's overall levels of repression, but they do not affect in any meaningful way the diffusion of repression between institutionally similar regimes. Furthermore, a regime's international connections and constraints are captured with dummy variables that measure whether a regime was allied with the US and/or Soviet Union (during the Cold War) or Russia (post-Cold War). The data on alliance is extracted from the Correlates of War data on Formal Alliances v 4.1 (Gibler 2008). Furthermore, a variable that captures the levels of foreign aid/capita is included because, very often, the allocation of foreign aid is conditional on the recipient's domestic politics (Escribà-Folch 2012). The inclusion of the foreign aid variable does not affect the baseline results reported in the main text of the paper (Models A18-20, Table 4.7 from Appendix).

Appendix 4.6 Democratic neighbors and diffusion of repression, 1951-2008.

VARIABLES	(Model A15)	(Model A16)	(Model A17)
$W_y^{\text{institutional similarity}}: \rho$	0.0263** (0.0120)		0.0262** (0.0120)
$W_y^{\text{experiential similarity}}: \rho$		-0.00164 (0.00381)	-0.00158 (0.00380)
Average democratic score of neighbours	-5.507*** (1.071)	-5.566*** (1.071)	-5.514*** (1.071)
Lagged physical integrity index	0.893*** (0.00769)	0.894*** (0.00766)	0.893*** (0.00769)
Co-optation	-1.372*** (0.142)	-1.379*** (0.142)	-1.374*** (0.142)
Log GDP/capita _{unit}	-1.459*** (0.511)	-1.672*** (0.505)	-1.474*** (0.513)
Log population size _{unit}	0.500 (0.464)	0.614 (0.461)	0.495 (0.464)
Incidence of conflict	0.977*** (0.224)	0.974*** (0.224)	0.976*** (0.224)
Share of conflict in neighboring countries	0.276 (0.595)	0.307 (0.595)	0.277 (0.595)
Cold War	1.100 (1.266)	1.075 (1.267)	1.102 (1.266)
Constant	17.77** (7.524)	20.20*** (7.478)	17.98** (7.543)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.947	0.947	0.947

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Appendix 4.7 International alliances, foreign aid and diffusion of repression, 1951-2008.

VARIABLES	(Model A18)	(Model A19)	(Model A20)
$W_y^{\text{institutional similarity}}: \rho$	0.0402*** (0.0137)	--	0.0402*** (0.0137)
$W_y^{\text{experiential similarity}}: \rho$	--	-0.00124 (0.00429)	-0.00110 (0.00428)
Soviet Union/Russia ally	-0.278 (0.630)	-0.275 (0.631)	-0.278 (0.630)
United States ally	0.763 (1.403)	0.751 (1.405)	0.764 (1.403)
Foreign aid/capita	-0.00459 (0.00309)	-0.00468 (0.00310)	-0.00460 (0.00310)
Lagged physical integrity index	0.885*** (0.00957)	0.889*** (0.00950)	0.885*** (0.00957)
Co-optation	-1.411*** (0.157)	-1.407*** (0.158)	-1.412*** (0.157)
Log GDP/capita _{unit}	-2.066*** (0.558)	-2.378*** (0.552)	-2.079*** (0.561)
Log population size _{unit}	-0.414 (0.313)	-0.433 (0.314)	-0.419 (0.314)
Incidence of conflict	0.560** (0.257)	0.563** (0.258)	0.559** (0.257)
Share of conflict in neighboring countries	0.588 (0.660)	0.647 (0.661)	0.590 (0.660)
Cold War	3.165*** (1.146)	3.126*** (1.148)	3.163*** (1.147)
Constant	28.33*** (7.472)	33.36*** (7.339)	28.53*** (7.510)
Observations	2,734	2,734	2,734
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.956	0.956	0.956

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

The S-OLS model used to estimate the diffusion of repression between authoritarian regimes relies on a continuous dependent variable (Franzese and Hays 2007; 2008). To further test the robustness of the findings, I follow Danneman and Ritter (2014) and assume that the physical integrity index from the CIRI Human Rights Data Project is continuous (Cingranelli and Richards 2010). This is an additive index formed from the indicators on torture, extrajudicial killings, political imprisonment and disappearances. It has been inversed so that 8

represents maximum repression and 0 no repression. The Table 4.8 from Appendix below replicates the main models from the paper. The results remain identical with the exception that neighbouring civil conflict seems to have a statistical significant effect on domestic levels of repression. This finding is identical to the one of Danneman and Ritter (2014), yet the difference in statistical significance is indicative of a sample selection bias for their findings.

Appendix 4.8 CIRI Physical Integrity Index and diffusion of repression, 1982-2008.

VARIABLES	(Model A21)	(Model A22)	(Model A23)
$W_y^{\text{institutional similarity}}: \rho$	0.118** (0.0477)	--	0.118** (0.0477)
$W_y^{\text{experiential similarity}}: \rho$	--	0.00887 (0.0155)	0.00888 (0.0155)
Lagged physical integrity index	0.409*** (0.0220)	0.410*** (0.0220)	0.409*** (0.0220)
Co-optation	-0.179*** (0.0504)	-0.179*** (0.0505)	-0.179*** (0.0504)
Log GDP/capita _{unit}	0.339* (0.196)	0.263 (0.194)	0.338* (0.196)
Log population size _{unit}	0.265*** (0.100)	0.265*** (0.100)	0.263*** (0.100)
Incidence of conflict	0.497*** (0.0684)	0.491*** (0.0685)	0.497*** (0.0684)
Share of conflict in neighboring countries	0.467** (0.187)	0.492*** (0.187)	0.467** (0.187)
Cold War	-0.291 (0.219)	-0.303 (0.219)	-0.292 (0.219)
Constant	-3.655 (2.574)	-2.487 (2.537)	-3.632 (2.575)
Observations	1,726	1,726	1,726
Country and Year Fixed Effects	Yes	Yes	Yes
R-squared	0.705	0.704	0.705

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

As discussed in the paper, a spatial ordinary least squares (S-OLS) can be used to estimate diffusion effects under certain assumptions (Ward and Gleditsch 2008). The most delicate issue with spatial models is that they induce a simultaneity bias in the coefficients because the outcome of unit i is influenced by the outcome of unit j, and vice versa. One method

to circumvent this problem is to use a temporally lagged spatial lag of repression in the S-OLS model setup. However, recent methodological advances in spatial econometrics (Franzese and Hays 2008; Hays, Kachi and Franzese 2010) allows us to deal with this simultaneity head-on. Also, the temporally lagged spatial lag was introduced in the models on the theoretical ground that regimes require time to process the information they receive from their peers. Franzese and Hays (2007; 2008) propose a maximum likelihood spatial model (S-ML) that deals with this simultaneity bias directly which does not require us to temporally lag the spatial lag. Furthermore, they argue that a temporally lagged spatial lag leads to a more conservative estimate of the spatial coefficient and a more stringent test for hypothesis testing (Franzese and Hays 2007). Against this, Table 4.9 from Appendix estimates three S-ML models (A24-A26) that estimate the diffusion of repression within the institutional and experiential peer groups. All the results are identical to the estimation results found in the main text of the paper in Table 4.1.

Appendix 4.9 Maximum likelihood spatial models with one and multiple temporally lagged spatial lags (m-STAR), The impact of and spatial dependence in repression, 1951-2008.

VARIABLES	(Model A24) S-ML	(Model A25) S-ML	(Model A26) m-STAR
$W_y^{\text{institutional similarity}}: \rho$	0.0265*** (0.00414)	--	0.0263** (0.0115)
$W_y^{\text{experiential similarity}}: \rho$	--	-0.00125 (0.00372)	-0.00125 (0.00372)
Lagged physical integrity index	0.901*** (0.00734)	0.903*** (0.00734)	0.901*** (0.00737)
Co-optation	-1.432*** (0.138)	-1.439*** (0.139)	-1.434*** (0.139)
Log GDP/capita _{unit}	-1.519*** (0.494)	-1.721*** (0.495)	-1.527*** (0.502)
Log population size _{unit}	0.198 (0.448)	0.318 (0.449)	0.200 (0.451)
Incidence of conflict	0.922*** (0.219)	0.918*** (0.219)	0.921*** (0.219)
Share of conflict in neighboring countries	0.215 (0.583)	0.245 (0.583)	0.217 (0.583)
Cold War	0.0220 (1.243)	0.0478 (1.243)	0.0202 (1.243)
Constant	20.82*** (7.308)	23.02*** (7.323)	20.91*** (7.380)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

The dependent variable used in the paper is a latent measurement for the level of repression from a regime. In its current operationalization, the dependent variable is based on the assumption that the level of repression is measured perfectly and without error. However, this assumption is not realistic considering that latent measures are formed by several data points and the final value it takes represents the best estimate of the measurement model through which it was created (Fariss 2017). To avoid bias in the reported results, Models A27-29 from Table 4.10 from Appendix are estimated through the procedure proposed by Schnakenberg and Fariss (2014). More precisely, the dataset used to estimate the S-OLS with the latent

measurement from (Fariss 2014)⁴² is duplicated 1,000 times and it is assigned a random draw from the posterior distribution of the latent variable of repression both for the outcome variable and its lagged outcome measure. Then, 1,000 OLS models are estimated and their coefficients and standard errors are combined to obtain one single estimate for each variable. Table A10 summarizes the procedure explained above. The results found in Models A27-29 mirror the most results reported in the main text of the article and its online appendix⁴³. The coefficients for population size, share of conflict in neighbourhood and Cold War period are now statistically significant and have the expected sign.

⁴² I use Fariss' latent measurement for repression his data provides the standard deviation of the posterior distribution of the measurement model. The Varieties of Democracy does not provide it in the data available online. Currently, the author is in contact with the V-Dem team to obtain the uncertainty measure of their physical integrity index. However, given that the results of the models using V-Dem's physical integrity index and Fariss' latent measure of human rights are identical, the used measure of uncertainty should not be of major concern as it is consistent with the expectations.

⁴³ Please note that in Fariss' measure, positive values represent more respect for human rights (less repression), and viceversa.

Appendix 4.10 Diffusion of repression and latent measurement uncertainty, 1951-2008

VARIABLES	(Model A27)	(Model 28)	(Model A29)
$W_y^{\text{institutional similarity}; \rho}$	0.0836** (0.0309)	--	0.0844*** (0.031)
$W_y^{\text{experiential similarity}; \rho}$	--	-0.0054 (0.025)	-0.011 (0.025)
Lagged physical integrity index	0.605*** (0.019)	0.611*** (0.0192)	0.605*** (0.019)
Co-optation	0.035*** (0.0141)	0.035*** (0.014)	0.035*** (0.014)
Log GDP/capita _{unit}	-0.193** (0.065)	0.243*** (0.062)	0.196*** (0.065)
Log population size _{unit}	-0.116*** (0.021)	-0.11*** (0.021)	-0.115*** (0.021)
Incidence of conflict	-0.135*** (0.019)	-0.132*** (0.019)	-0.135*** (0.019)
Share of conflict in neighbouring countries	-0.187*** (0.054)	-0.195*** (0.054)	-0.187*** (0.054)
Cold War	-0.329*** (0.139)	-0.329*** (0.139)	-0.329*** (0.138)
Constant	-0.733 (0.629)	-1.194 (0.60)	-0.764 (0.63)
Observations	3,863	3,863	3,863
Country and Year Fixed Effects	Yes	Yes	Yes

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Model 1 from Table 4.1 is able to estimate the model with both year fixed effects and Cold War dummy as it drops the first and last year fixed effects dummies. The first year fixed effect dummy is dropped as it is the baseline category, while the last one is dropped to avoid perfect collinearity between the year fixed effects and the Cold-War dummy variable. Table 4.11 in the Appendix contains the baseline model of the paper with unit and year fixed effects and Cold War dummy (model A30), a model without year fixed effects, but with the Cold War dummy (model A31) and a model with year (and unit fixed effects), but without the Cold War dummy. The results reported in the chapter do not change in any meaningful way in any of these different model specifications.

Appendix 4.11 Year fixed effects and Cold War dummy estimation, 1951-2008

VARIABLES	(1) repression	(2) repression	(3) repression
$W_y^{\text{institutional similarity}}: \rho$	0.0276** (0.0120)	0.0270** (0.0121)	0.0276** (0.0120)
Lagged physical integrity index	0.901*** (0.00754)	0.896*** (0.00756)	0.901*** (0.00754)
Co-optation	-1.432*** (0.142)	-1.338*** (0.141)	-1.432*** (0.142)
Log GDP/capita _{unit}	-1.506*** (0.513)	-1.819*** (0.516)	-1.506*** (0.513)
Log population size _{unit}	0.199 (0.462)	0.113 (0.465)	0.199 (0.462)
Incidence of conflict	0.922*** (0.224)	0.784*** (0.223)	0.922*** (0.224)
Share of conflict in neighbouring countries	0.215 (0.597)	-0.243 (0.594)	0.215 (0.597)
Cold War	0.503 (1.262)	1.982*** (0.254)	--
Constant	20.63*** (7.538)	22.70*** (7.572)	21.13*** (7.608)
Observations	3,863	3,863	3,863
R-squared	0.947	0.945	0.947
Year Fixed Effects	Yes	No	Yes
Unit Fixed Effects	Yes	Yes	Yes

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

5. Conclusion

The preceding three chapters sought to extend theoretically and empirically our understanding of the control strategies autocracies use to control the opposition and minimize the potential for conflict. While the three chapters of this dissertation have examined quite disparate dynamics of authoritarian control, they reveal some noteworthy aspects on the mutual relationship between co-optation and repression and how autocracies make use of them. Chapter 1 adopted an actor oriented approach in understanding use of lethal repression against social movements, while the Chapter 2 examined how institutions shape elites' incentives to challenge the leader via coup. Finally, Chapter 3 examined the international dimension of autocratic repression and the role that institutions play in facilitating the diffusion of repression.

Several noteworthy findings have emerged from this dissertation. Unsurprisingly, institutions shape behaviours and outcomes in authoritarian regimes, but they do in ways that have been previously omitted in the comparative literature on authoritarianism. First, studies show that not all autocracies repress equally (Davenport 2007b; Frantz and Kendall-Taylor 2014; Pereira 2005), but this variation in repression is explained only from a state-centric perspective. Then, Chapter 1 shows that the use of lethal repression against social movements is heavily influenced by the co-optation ability of the regime, the potential backlash of repression and the threat perception of the regime. Precisely, autocracies that ban political parties are less likely to refrain from using lethal repression against united social campaigns. However, as campaign lose their unity, these regimes are not more repressive than single party or multi-party autocracies. Further, the results also suggest that single party regimes are more likely than multi-party regimes to refrain from responding with lethal repression only when campaigns become fragmented. Finally, the analysis also indicates that accounting for the interaction between status of political parties and campaign unity improves our ability to predict

more accurately when autocracies will refrain from using lethal repression against social campaigns.

Second, when examining the co-optation strategies that authoritarian leaders use to insulate themselves from coups, I find that previous findings in the literature do not hold close scrutiny. Specifically, a two-stage selection model for coup attempts and outcomes shows that having an elected legislature reduces the likelihood of coup attempts, but has no effect on their success. This finding comes into direct contrast with previous findings on the effect of institutions on successful coups (Svolik 2012; Bove and Rivera 2015). This finding makes sense, considering that legislatures and political parties are more a forum for political negotiations and compromise rather than specialized units that can tilt the scales in an armed struggle. Simply, it shows the negative effect of institutionalization on coup success reported in previous studies is primarily driven by its effect on preventing coup attempts. Moreover, the results in the second chapter further contradict previous studies (Bove and Rivera 2015) as they show that purging elites increases the likelihood of coup attempts, but reduces their likelihood of success. More importantly, the results of Chapter 2 show that the vast majority of factors commonly associated with coup success are found to be significant only in deterring coup onset, but not affecting their outcome.

Finally, Chapter 3 brings a transnational dimension to institutions and state repression. In other words, it analyses how autocracies institutional and experiential similarity leads to regime interdependence in levels of repression. Using spatial lags models and latent measures of state repression, the analysis show that there is a strong and robust diffusion effect of repression between autocracies with similar institutions. Somehow surprising, considering the endogenous relationship between conflict and repression (Ritter and Conrad 2016), there is no diffusion of repression between autocracies that face similar dissent. Moreover, the results also indicate that

the transnational dependence in state repression is driven by spill over in the outcome (e.g. repression), not in the covariates (e.g. conflict). In other words, autocracies shape their repressive behaviour based on observed levels of repression in their peers, but they do not alter it as a response to events taking place in regimes with which they share a connection with.

Contributions

While noteworthy, these findings should be integrated into current academic debates on the control strategies in authoritarian regimes. Several academic and policy implications arise from the findings of this dissertation. The first chapter of this dissertation brings a theoretical and empirical contribution to the literature on authoritarianism and contentious politics by examining lethal repression against social campaigns as an equilibrium between the characteristics of the actors involved. To that end, it adopted an actor oriented approach in explaining the conditions under which autocracies are less likely to refrain from using lethal repression against dissidents. This actor oriented approach matters for our understanding of conflict processes in autocracies because it allows us to develop a more nuanced view of the dynamic between the warring parties, while also improving our ability to predict when we are most likely to observe escalation of violence to lethal levels. These findings have important implications for activists and dissidents opposing autocratic regimes. It helps them understand under which conditions repression is the most likely response of the government so that they can develop tactics to mitigate its costs.

Second, the thesis used a theoretical informed empirical modelling of coup activity. Precisely, previous research treated factors determining coup attempts as exogenous to its outcome and relegated them to the residuals. However, this is theoretically unrealistic because the coup determinants literature is based on the assumption that that coups are attempted only if the payoff is greater than the benefits of the status quo (Böhmelt and Pilster 2015) and the

probability of victory offsets the consequences of failure (Powell 2012). Thus, the factors that affect the decision to attempt a coup are not exogenous to the outcome, yet they were treated empirically as such (Svolik 2012; Bove and Rivera 2015). Then, I offered an alternative theoretical explanation through which institutions reduce the likelihood of coup attempts in authoritarian regimes and I used a two-stage selection model to appropriately model the stages of coup activity. Given that most factors associated with coup success are found to be significant only in deterring coup attempts, it is clear that we know little about what makes coup successful. Understanding what makes coups successful is important given that most coup attempts are successful (Powell 2012) which suggests that this is not due to chance alone. Improving the understanding of the factors that influence coup outcomes is crucial for our ability to forecast political stability (Beger, Dorff, and Ward 2014) and to help policy-makers, businesses and investors in making informed decisions about their work in countries at risk of instability.

Finally, understanding the transnational dimension of institutions and how they shape repression in other regimes has several implications for our understanding of state repression and authoritarian politics (Carey, 2010; Frantz and Kendall-Taylor, 2014; Svolik, 2012). With respect to state repression, the third chapter shows that there is a transnational dimension that drives domestic levels of repression in authoritarian regimes. With respect to diffusion processes in conflict, I show that not only externalities of conflict diffuse between regimes, but also regimes' strategies for dealing with the opposition (Bormann and Hammond, 2016; Buhaug and Gleditsch, 2008; Salehyan, 2007; Salehyan and Gleditsch, 2006). Finally, in relation to international dimensions of authoritarian rule, this is the first study that goes beyond comparative case studies to provide systematic evidence of diffusion of repression between authoritarian regimes and to show that institutions exert effects outside their own borders

(Bader, 2015; Odinius and Kuntz, 2015; Tolstrup, 2015; Way, 2015). The policy implication that arises from these findings is that international efforts to improve human rights practices in autocratic regimes could also work through an international dimension. In other words, autocracies might improve their human rights practices not only to because of direct incentives (e.g. foreign aid, structural adjustments) (Abouharb and Cingranelli 2007), but also to catch up with their peers in terms of international legitimacy.

Discussion and avenues for future research

Despite the noteworthy findings that contribute to the academic debate on autocratic control strategies, the studies from this dissertation display several limitations that open several avenues for future research.

The first chapter moved beyond current structural, country-year approaches from the literature on state repression to explore repression from an actor-oriented perspective, in which use of lethal repression was a function of the interaction between actors' characteristics. The empirical analysis showed that accounting for these characteristics improves the models' predictive power and our ability to predict these instances. While this is important for understanding the conditions under which dissidents are most likely to be repressed, this study is limited by the data used for the analysis. By focusing exclusively on repression, the study is unable to explain the conditions under which regimes might offer concessions or even ignore or tolerate dissidents (Franklin 2009). Then, future studies that examine government responses to dissidents should consider repression, concessions, and toleration in a more dynamic framework that shows the trade-offs and possible substitution effects between these responses. Next, by focusing on social campaigns with at least 1000 observable participants and a maximalist goal, the study is unable to explain how governments respond to lower levels of mobilization that are not as threatening as a large social campaign. Future research should focus

more in understanding how regimes respond to lower levels of mobilization and smaller demands, and what are the steps that dissidents make to overcome pre-emptive repression to mobilize large swaths of the population.

The second chapter relaxed the theoretical assumption behind current models of coup activity and used a theoretically informed two stage model to estimate the effect of institutions on coup activity. It showed that we know little about what makes coup successful given that most factors associated with coup success are found to be significant only in deterring coup attempts. The main limitation of this study, as most studies of authoritarian institutionalism, is that institutions are endogenous to their broader strategic environment and they cannot shape behaviours since they were created by powerful actors in order to manipulate other actors' behaviours (Pepinsky 2014). Similarly, Svobik (2012) finds support for this endogeneity concern by showing that legislatures exert a negative effect on the hazard of leaders dying of natural causes. While this problem plagues most studies on the effect of institutions, our current understanding of the role of institutions should not be disregarding completely. More precisely, while institutions are created by political actors and they are subject to manipulation by powerful political actors, they do shape and induce behaviours otherwise absent (Wintrobe 2000). If institutions under autocracies were mere window dressing, then their effects on political outcomes should not be distinguishable from random chance. However, future studies examining how institutions shape politics in autocracies should go beyond current approaches and find ways to use exogenous variation in institutionalization to test their effect on various political outcomes.

Finally, the third chapter of the thesis offers a novel theoretical account of autocratic repression and systematic empirical evidence of a diffusion effect of repression between autocracies with similar institutions. It posits that we observe this diffusion effect of repression

because autocracies adjust their levels of repression as they emulate and learn from their autocratic peers. The main limitation of this study is that emulation and learning cannot be empirically distinguished from each other with current data sources. A way to circumvent this problem in future research would be to empirically rule out alternative explanations and mechanisms that could explain why we observe diffusion of outcomes. Further, the transnational dimension of repression should receive more careful scrutiny as we already have enough evidence (Danneman and Ritter 2014; Bell, Clay and Murdie 2012) that there is a dynamic of transnational repression. Precisely, future research into the spatial dimensions of repression should examine how spill over in covariates and outcomes drive repressive behaviour in regimes around the world.

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